

**VCC Assessment Activity Report
Marsh Lumber Company
VCC Number 16-5858-RP
Pamplico, South Carolina
S&ME Project No. 1584-98-146C**



Prepared for:
Marsh Furniture Company, Inc.
Post Office Box 870
1001 S. Centennial Street
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Prepared by:
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October 31, 2016



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Marsh Furniture Company, Inc.
Post Office Box 870
1001 S. Centennial Street
High Point, North Carolina 27261

Attention: Mr. Bill Bumgarner

Reference: **VCC Assessment Activity Report**
Marsh Lumber Company VCC
Pamplico, South Carolina
S&ME Project No. 1584-98-146C

Dear Mr. Bumgarner:

S&ME, Inc. is pleased to present this report of the VCC assessment activities conducted at the referenced site. This report describes the methods used to assess potential contaminant impact to the site and establishing a baseline for the pending bio-spargage pilot test as described in the Voluntary Cleanup Contract (VCC) VCC 16-5858-RP.

S&ME appreciates the opportunity to be of service to you on this project. If you have questions or if you need additional information, please contact Edmund Henriques at 336-288-7180.

Sincerely,

S&ME, Inc.

Edmund Q.B. Henriques
Project Manager / Senior Geologist



John Whitehead, P.G.
Senior Geologist



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1.0 Site Location

The subject property is located at 119 Sixth Avenue, Pamplico, Florence County, South Carolina. The subject property includes approximately 15 acres of an approximate 28 acre parcel identified by the County of Florence as Tax Map Series Number 60005-01-003 (the property does not include the portion of the parcel east of the railroad tracks). The current owner is listed as Marsh Furniture Company, Inc. (MARSH). The subject site is zoned industrial and occupied by MARSH operations. The site location is shown on **Figure 1**.

2.0 Site History

Multiple environmental assessments have been completed on the subject site over the past 25 years. The Work Plan associated with this phase of assessment provided a list of the assessment reports completed for the subject site. The vast majority of the reports listed relate to the discovery, assessment, and remediation of pentachlorophenol (PCP) dissolved in groundwater beneath a portion of the site. The PCP incident is the focus of this Voluntary Cleanup Contract (i.e. VCC 16-5858-RP).

Based on S&ME's understanding of the site assessment work completed to date the following data gaps related to the PCP incident assessment were identified. The associated additional assessment activities are focused on refining the assessment of the horizontal extent of the dissolved phase plume and further assessment of plume stability. The additional data will also aid in pending evaluations of remedial alternatives for addressing the PCP contamination at the subject site.

- ◆ It is known that PCP was used in the area of the former Green Chain conveyor, hereafter referred to as the Green Chain. Prior soil sampling was conducted at points along the perimeter of the former Green Chain. PCP was not detected in the soil above the water table. In recent years MARSH terminated site saw mill operations. In 2007, the saw mill building and Green Chain concrete pad were removed. As a result of these changes, it is now possible to sample the soils below the former Green Chain and conclude the assessment of soils as secondary source of PCP to the underlying groundwater.
- ◆ Although the horizontal limits of the groundwater PCP plume have been generally defined, the installation and sampling of a few additional groundwater monitoring wells in the down-gradient regions of the PCP plume would enhance our understanding of the extent and stability of the plume. These data will be valuable to the pending assessment of remedial alternatives.
- ◆ A second Bio-Sparge Pilot test conducted in another portion of the PCP plume is needed to further evaluate the feasibility of this remedial alternative. The second pilot test will focus on monitoring for evidence of the bio-degradation of dissolved phase PCP versus the potential for sparging induced PCP migration.

Historic site assessment efforts included the collection of seventeen soil samples at points adjacent to the perimeter of the former Green Chain area. Soil sample analyses included semi-volatile organic compounds and the 8-RCRA metals (totals). During a March 2, 2016, meeting between MARSH representatives and SCDHEC representatives, SCDHEC requested that the VCC Work Plan include the collection soil and groundwater samples in the area of the PCP plume, with the samples analyzed total metals. Since MARSH is not aware of any historic site use of wood-preservatives with formulations based

on metals, and considering that the prior site assessment laboratory results did not evidence metals as a concern; the Work Plan incorporated the collection of a limited number of soil and groundwater samples.

The scope of services completed for the assessment discussed herein were conducted in general accordance with the VCC Work Plan – Revision 2, dated July 12, 2016, which was approved by SCDHEC on July 19, 2016.

3.0 VCC Methodologies

3.1 Soil Evaluation

Between September 7 - 9, 2016, soil sampling was conducted in the former Green Chain area utilizing direct push drilling techniques. Three soil borings were completed along the alignment of the former Green Chain conveyor (locations GC-1, GC-2, and GC-3) and one soil boring (location GC-4) was completed to the west in the adjacent former treated wood stacking area. The samples were collected by advancing the direct push sampler, as needed to collect continuous soil sample cores down to approximately six feet below the land surface (bls.). At each boring, a surficial soil sample was collected from approximately zero to one foot bls., and a subsurface soil sample was collected from approximately 5.5 to six feet bls. The location of each soil boring were recorded using a non-survey grade GPS. Approximate locations for the soil borings are shown on **Figure 2**.

The soils samples from the designated depths were placed in laboratory prepared containers and placed in a cooler with ice for shipment to the analytical laboratory. Chain of Custody documentation accompanied the samples to the laboratory. Each of the soil samples was analyzed for TAL Metals (various methods) and TCL Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270. The soil analytical results were compared to the Residential and Industrial regional screening levels (RSL) and to the applicable protection of groundwater site screening levels (Groundwater SSLs) published by the U.S. Environmental Protection Agency (EPA) and used by SCDHEC to evaluate contaminant concentrations from VCC assessments.

Analytical testing of soil samples was performed by PACE Analytical Services, Inc. of Huntersville, North Carolina. Their South Carolina certification numbers are: Metals # 99030001, SVOCs # 99006001.

Appendix I contains copies of the laboratory analytical reports.

3.2 Groundwater Quality Evaluation – New Sentinel Wells

3.2.1 *Monitoring Well Installation*

Between September 7 - 9, 2016, three permanent groundwater monitoring wells were installed at the site, as new down-gradient sentinel wells. The locations of the monitoring wells are shown on **Figure 2**. The wells were installed at the following locations:

- ◆ Monitoring well MW-19, approximately 120 feet west and down-gradient of MW-16.
- ◆ Monitoring well MW-20, approximately 110 feet west and down-gradient of MW-10, and
- ◆ Monitoring well MW-17A will be installed in the general vicinity of abandoned well MW-17.

The monitoring wells were installed utilizing a direct push drilling rig equipped with 3.25-inch inside diameter, hollow-stem augers. The wells were completed utilizing two-inch diameter, schedule 40 PVC pipe and 0.01-inch slotted screen. The screen intervals were typically 10 feet in length. An artificial sand pack was installed around the screen section to approximately two-feet above the top of the screen. A bentonite seal was installed above the sand pack. The remainder of the well annulus was filled with cement grout to the surface. The wells were completed at the surface with a two-foot square concrete pad and locking post-type covers. The monitoring well construction details are summarized on **Table 1**. The Well Logs and SCDHEC 1903 forms are attached in **Appendix II**.

The wells were developed using an electric submersible pump to remove clay, silt, and sand particles that may have been introduced into the formation or filter pack during installation.

3.2.2 Groundwater Sampling and Analysis

On September 15, 2016, groundwater samples were collected from monitoring wells MW-17A, MW-19, and MW-20 using a peristaltic pump with silicone and polyethylene tubing. The polyethylene tubing was lowered to the lowermost portion of well screen interval, consistent with prior sampling events. Each well was purged using low flow rates and monitored for pH, temperature, conductivity, dissolved oxygen (DO), oxidation reduction potential (ORP), and turbidity using a flow cell and Horiba U-5000 meter. At a minimum, the time interval between measurements was the time required for one complete exchange of the volume of water in the flow cell. Sample collection generally commenced when the changes in those readings fluctuate within $\pm 10\%$ or less. For turbidity a target of less than or equal to 10 Nephelometric Turbidity Units (NTU) was used as a guide for sample collection. Professional judgement was utilized in certain cases when other field parameter readings were stable; however, the target NTU value was not achieved. **Table 2** provides a summary of field parameter data collected.

Groundwater samples were placed into appropriate sample containers supplied by the analytical laboratory and then placed into coolers with ice. Chain of Custody documentation accompanied the samples to the laboratory. The samples were shipped via dedicated courier to the analytical laboratory. Samples from the monitoring wells were analyzed for TCL SVOCs by Method 8270 by PACE Analytical located in Huntersville, North Carolina. **Appendix I** contains copies of the laboratory analytical reports.

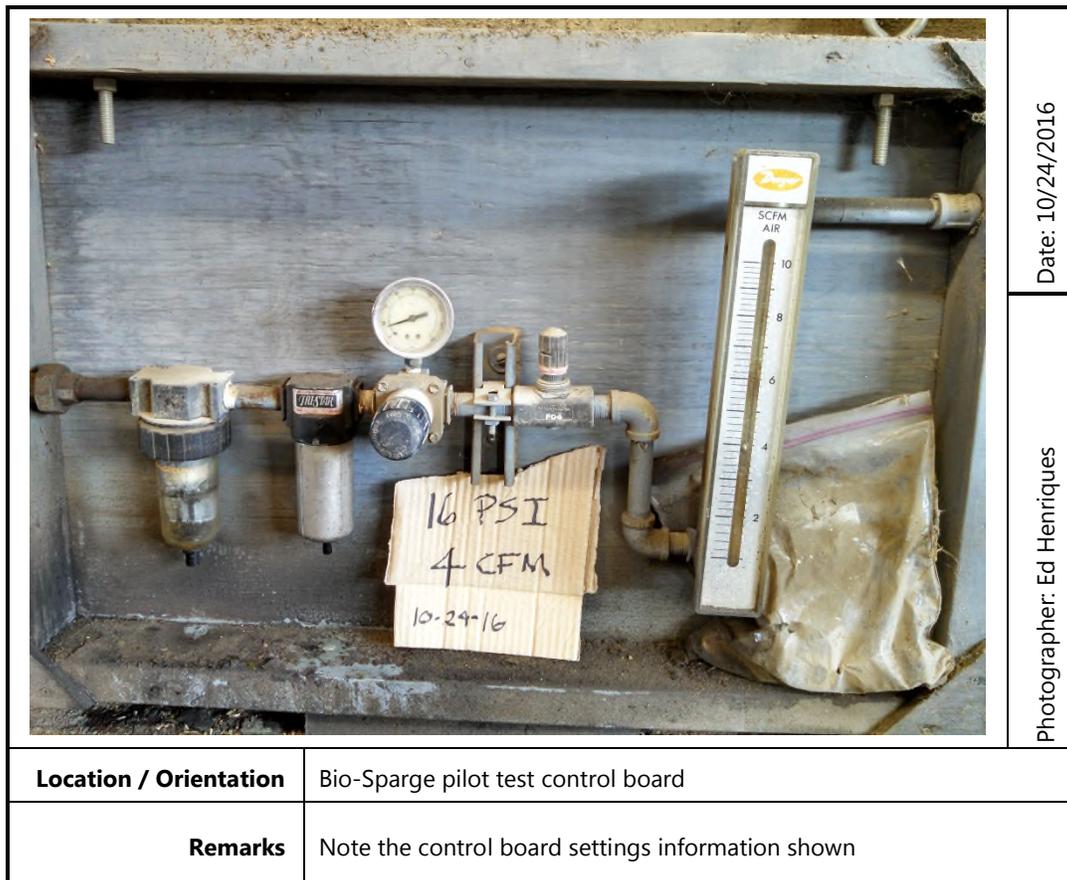
3.3 Bio-Sparge Pilot Test Baseline

In 2009, MARSH initiated a long-term bio-sparge pilot test in the region up-gradient of monitoring well MW-3. Analytical results for groundwater samples obtained from monitoring well MW-3 provide evidence for long-term reductions in the dissolved PCP concentrations at monitoring well MW-3. Recognizing the success of the first long-term bio-sparge pilot test, the VCC Work Plan included a second bio-sparge pilot test to be conducted up-gradient of well MW-14. Data collected from the long-term pilot tests will be utilized in the ensuing analysis of remedial alternatives for the PCP incident.

The Work Plan included installing one bio-sparge well identified as BSW-3 and three permanent groundwater monitoring wells identified as MW-21, MW-22, and MW-23 to be installed in the vicinity of BSW-3 to supplement existing monitoring well network for performance monitoring of bio-sparge pilot test #2. The three new monitoring wells plus existing monitoring wells MW-10, MW-14, and MW-15 will be utilized to monitor groundwater quality for evidence of bio-degradation of PCP and for an assessment of the potential for localized pilot test induced PCP migration.

To establish a groundwater quality base-line for the pilot test area, groundwater samples were to be obtained and analyses performed prior to the initiation of the pilot test. Following initiation of the pilot test, the groundwater monitoring program will include quarterly monitoring events, conducted for up to two years. For the base-line and quarterly events monitoring wells MW-10, MW-14, MW-15, MW-21, MW-22, and MW-23 will represent the pilot test monitoring network.

SCDHEC issued a Permit to Construct one Class V.A.-I injection well at the Marsh Lumber Company site (bio-sparge well BSW-3), UIC Permit #SCHE03020255M, dated June 27, 2016. The bio-sparge system obtains compressed air from an air-compressor used for multiple purposes at the Marsh facility. Compressed air is supplied to the bio-sparge system control board located in a building north of the former Green Chain Area (see **Figure 2**). The same control board was used during bio-sparge test #1. The control board (see photograph below) contains a particulate filter, a coalescing filter, a pressure regulator, and a flow controller. The pressure regulator provides for control over the air-pressure (pounds per square inch – PSI) delivered to the sparge well, whereas the flow controller provides for the control over the air flow rate (cubic feet per minute – CFM) delivered to the sparge well. During September 2016, an air-line was installed underground between control board and well BSW-3 (see **Figure 2**). Fittings necessary to connect the airline to the BSW-3 well head were also installed. The underground airline was not connected to the control board until October 24, 2016, following the October 17, 2016, issuance of the permit to operate by SCDHEC.



		Date: 10/24/2016
		Photographer: Ed Henriques
Location / Orientation	Bio-Sparge Well BSW-3	
Remarks	Note pressure gauge at well head. The red compressed air-line connected to well was run underground from this point and over to the bio-sparge pilot test control board located in the shed style building to the north as shown on Figure 2.	

3.3.1 *Monitoring Well and Bio-Sparge Well Installation*

Between September 7 - 9, 2016, one bio-sparge well (BSW-3) and three permanent groundwater monitoring wells (MW-21, MW-22, and MW-23) were installed. The locations of these wells are shown on **Figure 2**.

The monitoring wells and bio-sparge were installed utilizing a direct push drilling rig equipped with 3.25-inch inside diameter, hollow-stem augers. The wells were completed utilizing two-inch diameter, schedule 40 PVC pipe and 0.01-inch slotted screen. The screen intervals for each well are noted in **Table 1**. An artificial sand pack was installed around the screen section to approximately two-feet above the top of the screen. A bentonite seal was installed above the sand pack. The remainder of the well annulus was filled with cement grout to the surface. Each well was completed at the surface with a two-foot square concrete pad and post-type cover. The monitoring well construction details are summarized on **Table 1**. The Well Logs and SCDHEC 1903 forms are attached in **Appendix II**.

The wells were developed using an electric submersible pump to remove clay, silt, and sand particles that may have been introduced into the formation or filter pack during installation.

3.3.2 *Groundwater Sampling and Analysis*

From September 14 - 15, 2016, groundwater samples were collected for the base-line monitoring event. Monitoring wells MW-10, MW-14, MW-15, MW-21, MW-22, and MW-23 were sampled using a peristaltic pump using silicone and polyethylene tubing. The polyethylene tubing was lowered to the lowermost portion of well screen interval. Each well was purged and monitored for pH, temperature, conductivity, ORP, DO, and turbidity using a flow cell and Horiba U-5000 meter. At a minimum, the time interval between measurements was the time required for one complete exchange of the volume of water in the flow cell. Sample collection generally commence when the changes in those readings fluctuate within $\pm 10\%$ or less. For turbidity a target of less than or equal to 10 NTU was used as a guide for sample collection. However, professional judgement was utilized when the field parameter readings were stable and the target NTU value had not been achieved. At the time of sample collection, ferrous iron was field measured using a HACH DR/890 Colorimeter. **Table 2** provides a summary of the field data collected prior to sample collection.

Groundwater samples were placed into appropriate sample containers supplied by the analytical laboratory and then placed into coolers with ice. Chain of Custody documentation accompanied the samples to the laboratory. The samples were be shipped via dedicated courier to the analytical laboratory. The groundwater samples were analyzed for TCL SVOCs by Method 8270, Chloride by Method 4500, Total Organic Carbon by Method 5310B, and Alkalinity by Method 2320B, by PACE Analytical located in Huntersville, North Carolina. **Appendix I** contains copies of the laboratory analytical reports.

3.4 **Modification of Existing Monitoring Wells**

The pre-existing site monitoring wells were installed with flush-mount well covers due to historic site heavy equipment traffic. Several of these monitoring wells were located in low-lying areas, and it has been observed that well vaults fill with water after rain events. To avoid problems associated with rain water ponding inside wells vaults pre-existing monitoring wells MW-3A, MW-10, MW-11, MW-13, MW-14, MW-15, and MW-16 were retrofitted with stick-up (e.g. post) well covers. Monitoring wells MW-1, MW-9, BSW-1, and BSW-2 were not modified based on potential vehicular traffic concerns or the observed integrity of the current flush well cover systems. These monitoring well improvements altered the top of casing elevations for those wells converted from flush covers over to stick-up covers.

The conversion of certain existing monitoring wells from flush-mount covers to stick-up type covers was completed by September 30, 2016, substantially after the depth to groundwater data was collected as part of this monitoring event. The well conversions altered the top of casings elevations. These two factors combined made it impractical to provide comparable groundwater elevations for monitoring wells MW-10, MW-14, and MW-5, utilizing depth to groundwater data obtained September 14-15, 2016.

		Date: 10/24/2016
		Photographer: Ed Henriques
Location / Orientation	Monitoring well MW-22, looking south	
Remarks	Example of stick-up (post-style) well covers installed	

S&ME contracted Nesbitt Surveying Company, Inc. to survey the locations and top of casing elevations for the monitoring wells (existing and new) associated with the monitoring of the PCP groundwater plume. They also surveyed the location of the new storm water drainage line system installed within a portion of the Marsh Lumber site. **Figure 2** depicts the updated survey well locations and the location of the new storm water drainage line system installed by the South Carolina Department of Transportation (SCDOT) and Town of Pamplico.

3.5 Groundwater Elevation Monitoring

The elevation of the top of well casings and locations of the wells were established by Nesbitt Surveying Company, Inc. (see Section 3.4). Groundwater levels were measured in new monitoring wells MW-17A, MW-19, MW-20, MW-21, MW-22, and MW-23 following stabilization of the water table for at least 24 hours. The groundwater levels were measured utilizing an electronic water level indicator. The probe of the water level indicator was lowered into the well until the probe contacted the water surface indicated by a solid tone or illumination of a light. The depth to groundwater was measured from the established top of casing elevation and was recorded to the nearest 0.01- foot. The groundwater level data was subtracted from the top of casing elevation to provide a relative groundwater elevation. The groundwater elevation data is shown on **Table 1**.

The groundwater elevation data was placed on a site map and contoured providing an approximation of the groundwater surface below the site. The groundwater surface is shown on **Figure 3**. Based on the depth to groundwater measurements obtained, groundwater flow in this portion of the site appears to be

toward the west under an approximate hydraulic gradient of 0.02 feet per foot (ft/ft), generally consistent with prior observations.

4.0 Investigation Derived Waste Disposal

Investigative-derived waste (IDW) in the form of soil cuttings and monitoring well purge water was generated during this phase of assessment. The cuttings and purge water were placed into new 55-gallon drums, labeled, and left on the site pending the results of the laboratory analysis of the soil and groundwater samples, which were considered representative of the drummed materials. A composite sample labeled D-1, was collected to represent the drummed soil cuttings. Soil sample D-1 was submitted for laboratory analysis for TCL SVOCs and TAL Metals (totals) by PACE Analytical located in Huntersville, North Carolina. No target SVOCs were detected and no total metal concentration was greater than the corresponding EPA Characteristic Hazardous Waste level applying the 20 times rule. Soil cuttings disposal remains pending. **Appendix I** contains copies of the laboratory analytical report.

On October 24, 2016, a composite sample was collected representative of the monitoring well development and purge water stored on-site in 55-gallon drums. The sample was collected on this date which represented the end of this purge water accumulation period. The collected sample was submitted for laboratory analysis for SVOCs by Method 8270 for waste characterization. Following receipt of the analytical results, waste profiles will be developed, and the IDW transported off-site for proper disposal.

5.0 Summary of Findings

5.1 Soil Sample Results

For the eight soil samples collected in the Green Chain area the sample IDs ending with a "1" indicate samples obtained between approximately 0.5 foot and one foot bls. The sample IDs ending with a "6" indicate samples obtained between approximately 5.5 feet and six feet bls. **Table 3** provides a summary of the TAL Metals detections. **Table 4** provides a summary of the SVOC detections. The soil analytical results were compared to the Residential and Industrial regional screening levels (RSL) and to the applicable protection of groundwater site screening levels (Groundwater SSLs) published by the U.S. Environmental Protection Agency (EPA) and used by SCDHEC to evaluate contaminant concentrations from VCC assessments.

5.1.1 *Metals (totals)*

As noted in the Work Plan, MARSH is not aware of any historic site use of wood-preservatives with formulations based on metals. Historic site assessment laboratory test results did not evidence metals as a concern; however, SCDHEC requested that the VCC assessment include the collection of a limited number of representative soil samples to assess the former Green Chain area. With this understanding, the soil sample analytical results obtained during this assessment were examined for plausible evidence of soil impacts commonly associated with other wood treatment methods. Therefore, a broader assessment of site-specific naturally occurring metal concentrations was not conducted.

As summarized in **Table 3**, multiple target metal (totals) were detected in each soil sample. The following provides a summary of each metal with a reported concentration greater than one or more of the referenced screening levels.

- ◆ Antimony concentrations reported for each near surface samples (approximately 0.5 foot to one foot bls) were less than the corresponding Residential RSL, with three of the four samples reporting concentrations greater than the corresponding Groundwater SSL. Analytical results for soil samples representing the deeper soil interval (approximately 5.5 feet to six feet bls.) reported concentrations less than the laboratory reporting limit.
- ◆ Arsenic concentrations reported for each near surface samples were greater than the corresponding Residential RSL but less than the Industrial RSL. The detected concentrations for soil samples representing the deeper soil interval were greater than the corresponding Groundwater SSL.
- ◆ Iron concentrations reported for each near surface samples were less than the corresponding Residential RSL. Analytical results for soil samples representing the deeper soil interval reported concentrations greater than the corresponding Groundwater SSL.
- ◆ Lead was detected in two of four near surface soil samples, the detected concentrations were less than the corresponding Residential RSL. Analytical results for soil samples representing the deeper soil interval reported concentrations less than the corresponding Groundwater SSL.
- ◆ Manganese concentrations reported for each near surface sample were less than the corresponding Residential RSL, with all four samples reporting concentrations greater than the corresponding Groundwater SSL. Analytical results for soil samples representing the deeper soil interval reported concentrations greater than the corresponding Groundwater SSL.
- ◆ Selenium was detected in one of four near surface soil samples, the detected concentration was less than the corresponding Residential RSL. Selenium was detected two of the four soil samples representing the deeper soil interval. The detected concentrations were greater than the corresponding Groundwater SSL.

Since this assessment did not include an assessment of site-specific naturally occurring metal concentrations, the reported total metal concentrations were broadly compared with background concentrations reported in *Elements In South Carolina Inferred Background Soil and Stream Sediment Samples*, by Judy Conova 1999. The total metal concentrations reported in **Table 3** generally fall within the ranges of published background concentrations for coastal plain sediments, or state wide concentrations if a coastal plain reference was not published. Furthermore, the total metals concentrations reported for these samples do not provide plausible evidence of soil impacted by metals associated with other common wood treatment methods. This finding is consistent with known historic site use activities. Acknowledging that the objective of this additional soil assessment was to assess the Green Chain area for evidence of soil impacted by metals associated with other common wood treatment methods, no additional assessment of total metals in soils is warranted.

5.1.2 *Semi-Volatile Organic Compounds*

It is known that PCP was used in the former Green Chain area. Previous assessment soil sampling was conducted at points along the perimeter of the former Green Chain and PCP was not detected in the soil above the water table. In 2007, the saw mill building and Green Chain concrete pad were removed. To conclude the assessment of site soils as secondary source of PCP to the underlying groundwater, eight

soil samples were collected in the Green Chain area during September 2016. **Table 4** provides a summary of analytical results for SVOCs by Method 8270.

- ◆ PCP was detected in sample GC-2-1, representing the 0.5 to one foot below land surface interval at probe location GC-2. The detected concentrations was less than the corresponding Industrial, Regional Screening Level (RSL) and greater than the corresponding Groundwater SSL. PCP was not detected in the deeper sample (GC-2-6) representing 5.5 feet to six feet bls. Location GC-2 is in close proximity of monitoring well MW-1, which has historically reported PCP concentrations in the groundwater as less than the method reporting limit.
- ◆ 2, 3, 4, 6-Tetrachlorophenol was detected in sample GC-1-1, representing the 0.5 to one foot bls interval at probe location GC-1. It was not detected in the deeper sample (GC-2-6) representing 5.5 feet to six feet bls. The detected concentrations was greater than the corresponding Industrial RSL and greater than the corresponding Groundwater SSL. This compound is a probable first-order PCP degradation daughter compound.
- ◆ No other semi-volatile organic compounds were detected in the remaining soil samples collected within the Green Chain Area, representing both shallow soil sampled intervals (0.5 to one foot bls) and deeper soil sample intervals (5.5 feet to six feet bls).

5.2 New Sentinel Monitoring Well - Groundwater Results

As summarized in **Table 5**, PCP was not detected in the groundwater samples obtained at monitoring wells MW-19, MW-20, and MW-17A (which replaced MW-17) at concentrations greater than the reporting limit. These findings generally validated prior estimated extents of the dissolved phase PCP plume in the areas represented by these monitoring wells.

5.3 Bio-Sparge Baseline Event – Groundwater Results

The bio-sparge baseline sampling event was completed to establish baseline water quality conditions at monitoring wells MW-10, MW-14, MW-15, MW-21, MW-22, and MW-23, prior to the initiation of the bio-sparge pilot test. Monitoring well MW-14 represented the known dissolved-phase PCP hot spot. As summarized in **Table 5**:

- ◆ PCP was detected at monitoring well MW-14 at a concentration that is identical to the concentration reported for the February 2, 2016 monitoring event. The detected concentration exceeds the MCL for PCP set a 1 microgram per liter ($\mu\text{g/L}$).
- ◆ PCP was detected at monitoring well MW-21 at an estimated concentration of 16.6, which exceeds the MCL for PCP. The quality assurance sample collected at well MW-21, identified as “duplicate” reported a similar, estimated concentration of 21.5 $\mu\text{g/L}$.
- ◆ Benzoic Acid was detected at monitoring well MW-23 at an estimated concentration that is less than the corresponding RSL for Tap Water. There is no corresponding MCL for benzoic acid.
- ◆ Laboratory analytical results for alkalinity, chloride, and total organic carbon provide baseline data for bio-sparge pilot test. Similarly, groundwater field parameters including depth to groundwater, temperature, pH, conductivity, dissolved oxygen, and oxidation reduction potential, were also collected to establish the baseline. Future quarterly monitoring data will be compared with this baseline data to assess the potential effectiveness of bio-sparging to reduce groundwater PCP concentrations in the pilot test area.

Groundwater analytical data for this baseline monitoring event suggests that the horizontal extent PCP in the area surrounding monitoring well MW-14 may be less than what was estimated following the February 2016 annual monitoring event. New monitoring wells MW-21, MW-22, and MW-23 provide a more refined well spacing than previously available. The refined well spacing was essential for monitoring of the bio-spargers pilot test.

Figure 3 depicts the distribution of PCP in groundwater based on the analytical results obtained for the September 2016 monitoring event. This drawing was prepared assuming a logarithmic distribution of PCP between the sampled locations. Since an estimated PCP concentration was reported, the method detection limit level for each sample was used for contouring, when no quantified or estimated PCP concentration was reported. The analytical report for the February 2016 annual groundwater monitoring event listed quantitation limits for PCP; however, no corresponding method detection limits. Accordingly, February 2016 and September 2016 data sets were not pooled to prepare a single PCP isoconcentration map for inclusion in this report.

Table 1
Well Construction Details
Marsh Lumber Company
Pamlico, South Carolina
S&ME Project No. 1584-98-146C

Well ID	Date Well Completed	Top of Casing Elevation ₁ (mean sea level)	Depth to Groundwater September 2016 (feet below TOC)	Groundwater Elevation September 2016 (mean sea level)	Total Depth (feet bls.)	Well Diameter (inches)	Screen (feet bls.)	Riser* (feet bls.)	Installed By	Comments	
MW-1	1/4/1993	85.55	not measured	not determined	15.3	2	5.3	15.3	0.0 - 5.3	LAW	
MW-2	1/4/1993	85.04	not measured	not determined	15.3	2	5.3	15.3	0.0 - 5.3	LAW	
MW-3A	12/14/2004	88.59	not measured	not determined	15.0	2	5.0	15	0.0 - 5.0	S&ME	replaced MW-3
MW-9	10/8/1993	83.50	not measured	not determined	18.0	2	8.0	18	0.0 - 8.0	LAW	
MW-10	10/8/1993	83.30	6.77	76.53	15.0	2	5.0	15	0.0 - 5.0	LAW	
MW-11	10/11/1993	85.61	not measured	not determined	15.0	2	5.0	15	0.0 - 5.0	LAW	
MW-13A	12/14/2004	83.52	not measured	not determined	22.0	2	7.0	22	0.0 - 7.0	S&ME	replaced MW-13
MW-14	8/16/2000	82.18	5.51	76.67	16.0	2	6.0	16	0.0 - 6.0	S&ME	
MW-15	8/16/2000	82.32	8.34	73.98	15.0	2	5.0	15	0.0 - 5.0	S&ME	
MW-16	8/16/2000	83.65	not measured	not determined	16.0	2	6.0	16	0.0 - 6.0	S&ME	
MW-17A	9/9/2016	82.37	8.91	73.46	15.9	2	5.9	15.9	0.0 - 15.9	S&ME	replaced MW-17
MW-18A	1/7/2009	80.17	not measured	not determined	15.2	2	13.2	15.2	0.0 - 13.2	S&ME	
MW-18B	1/7/2009	80.27	not measured	not determined	6.7	2	4.7	6.7	0.0 - 4.7	S&ME	
MW-19	9/8/2016	79.56	5.76	73.80	17.6	2	7.4	17.4	0.0 - 7.4	S&ME	
MW-20	9/9/2016	80.59	7.37	73.22	13.9	2	3.9	13.9	0.0 - 3.9	S&ME	
MW-21	9/9/2016	84.04	7.94	76.10	15.8	2	5.8	15.8	0.0 - 5.8	S&ME	
MW-22	9/9/2016	81.74	5.79	75.95	17.1	2	7.1	17.1	0.0 - 7.1	S&ME	
MW-23	9/9/2016	81.37	7.57	73.80	11.8	2	6.8	11.8	0.0 - 6.8	S&ME	
BSW-1	1/9/2009	no data	not measured	not determined	18.5	2	16.0	18.5	0.0 - 16.0	S&ME	Bio-sparge well
BSW-2	1/9/2009	no data	not measured	not determined	20.0	2.0	10.0	20.0	0.0 - 10.0	S&ME	
BSW-3	9/9/2016	81.34	not measured	not determined	16.8	2	15	16.8	0.0 - 15.0	S&ME	Bio-Sparge well

Top of Casing Elevations₁ = Based data provided by Nesbitt Surveying Company, Inc. on 10/27/2016

Yellow shaded cells indicate the top of casing elevations were changed after depth to groundwater elevations were measured. Groundwater elevation data not comparable.

feet bls. = feet below land surface

feet below TOC = feet below top of well casing

Riser* = relative to top of casing

Table 2
Summary of Field Parameters
Groundwater Monitoring
Marsh Lumber Company
Pamplico, South Carolina
S&ME Project No. 1584-98-146C

Well ID	Date Sampled	Total Depth (feet)	Depth to Groundwater (feet)	Groundwater Temperature (Celsius)	pH (s.u.)	Conductivity ($\mu\text{s}/\text{cm}^3$)	D.O. (mg/L)	ORP (millivolts)	Turbidity (NTU)	Ferrous Iron (mg/L)
MW-10	9/14/2016	16.40	6.77	25.2	6.7	0.546	0.0	-8	8.8	0.18
MW-14	9/14/2016	13.00	5.51	26.5	5.1	0.130	0.0	77	4.9	2.26
MW-15	9/14/2016	18.10	8.34	26.0	6.1	0.663	0.3	-64	14.9	3.30
MW-17A	9/15/2016	18.90	8.91	26.6	7.1	0.368	0.0	-2	19.2	not measured
MW-19	9/15/2016	20.40	5.76	24.6	5.9	0.510	0.0	-17	10.0	not measured
MW-20	9/15/2016	16.90	7.37	24.9	6.8	0.368	0.0	-97	2.5	not measured
MW-21	9/15/2016	19.10	7.94	28.8	5.5	0.161	0.0	189	19.0	0.11
MW-22	9/15/2016	20.50	5.79	29.0	6.5	0.308	0.0	-56	13.0	0.52
MW-23	9/15/2016	15.50	7.57	27.0	6.2	0.558	0.0	-36	11.9	3.3

Total Depth and Depth To Groundwater measurements are relative to top of well casing.

pH measured in S.U. = Standard Units.

Conductivity (Specific Conductance) measured in $\mu\text{s}/\text{cm}$ indicates micro Siemens per centimeter.

D.O. = dissolved oxygen, measured in milligrams per liter

ORP = Oxidation Reduction Potential, mV-NHE indicates millivolts-Normal Hydrogen Electrode.

NTU indicates Nephelometric Turbidity Units.

Table 3
Summary of Soil Sample Analytical Data
TAL Metals
Marsh Lumber Site
Pamplico, South Carolina
S&ME Project No. 1584-98-146C

Parameter	Method	Units	Regional Screening Levels - May 2016 (Target Cancer Risk = 1E-06, Hazard Quotient 1.0)			Soil Sample ID															
			Residential	Industrial	Groundwater SSL	GC-1-1		GC-1-6		GC-2-1		GC-2-6		GC-3-1		GC-3-6		GC-4-1		GC-4-6	
						9/9/2016	9/9/2016	9/7/2016	9/7/2016	9/9/2016	9/7/2016	9/9/2016	9/7/2016	9/9/2016	9/7/2016	9/9/2016	9/7/2016				
Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual		
Aluminum	6010C	mg/kg	77,000	1,100,000	30,000	2,980		6,950		8,230		5,910		3,500		14,500		3,420		13,500	
Antimony	6010C	mg/kg	31.0	470	0.27	0.70		<0.43		0.69		<0.42		<0.35		<0.46		0.60		<0.36	
Arsenic	6010C	mg/kg	0.68	3.0	0.29	1.6		<0.87		1.9		1.5		1.1		4.5		2.7		4.0	
Barium	6010C	mg/kg	15,000	220,000	82	74.7		10.9		33.7		17.9		45.0		14.1		53.9		10.6	
Beryllium	6010C	mg/kg	160	2,300	3.2	0.077		<0.087		0.15		0.089		0.15		0.24		0.12		0.20	
Cadmium	6010C	mg/kg	71.0	980	0.38	<0.074		<0.087		0.10		<0.084		<0.070		<0.092		<0.064		<0.072	
Calcium	6010C	mg/kg	not listed	not listed	not listed	6,030		1,270		3,060		695		4,260		466		56,700		942	
Chromium	6010C	mg/kg	not listed	not listed	180,000	4.1		6.0		18.2		10.4		5.4		28.8		15.0		30.4	
Cobalt	6010C	mg/kg	23.0	350	2.7	0.64		<0.43		0.49		<0.42		0.42		<0.46		0.63		<0.36	
Copper	6010C	mg/kg	3,100	47,000	46	7.1		0.63		5.3		1.2		4.4		1.6		12.0		1.6	
Iron	6010C	mg/kg	55,000	820,000	350	3,930		5,370		18,500		9,170		4,830		30,400		8,900		29,900	
Lead	6010C	mg/kg	400	800	14	16.7		6.4		9.1		4.6		40.8		8.4		12.2		7.8	
Magnesium	6010C	mg/kg	not listed	not listed	not listed	433		190		298		189		389		603		1,370		316	
Manganese	6010C	mg/kg	1,800	26,000	28	128		6.7		81.1		18.6		85.9		2.7		159		5.2	
Nickel	6010C	mg/kg	1,500	22,000	26	1.6		0.66		2.1		0.86		1.1		1.3		5.2		1.1	
Potassium	6010C	mg/kg	not listed	not listed	not listed	393		<433		500		<418		585		862		438		766	
Selenium	6010C	mg/kg	390	5,800	0.26	<0.74		<0.87		1.6		<0.84		<0.70		2.7		<0.64		2.3	
Silver	6010C	mg/kg	390	5,800	0.80	<0.37		<0.43		<0.37		<0.42		<0.35		<0.46		<0.32		<0.36	
Sodium	6010C	mg/kg	not listed	not listed	not listed	<370		<433		<368		<418		<352		<459		<321		<360	
Thallium	6010C	mg/kg	0.78	12.0	0.14	<0.74		<0.87		<0.74		<0.84		<0.70		<0.92		<0.64		<0.72	
Vanadium	6010C	mg/kg	390	5,800	86	9.4		12.2		38.7		20.6		11.7		60.8		12.6		60.9	
Zinc	6010C	mg/kg	23,000	350,000	370	19.9		<0.87		248		1.9		10.1		1.2		107		1.3	
Mercury	7471	mg/kg	11.0	46.0	0.1	0.038		0.018		0.038		0.011		0.0082		0.027		0.053		0.020	

Bold value indicates a detection above the reporting detection limit (RDL)
Groundwater soil screening level (SSL) is based on risk-based data (black font) or maximum contaminant level (MCL) data (red font)
Yellow shaded cell indicates detected concentration exceeds one or more of the screening criteria

Table 4
Summary of Soil Sample Analytical Data
Semi-Volatile Organics Compounds
Marsh Lumber Site
Pamplico, South Carolina
S&ME Project No. 1584-98-146C

Parameter	Method	Units	Regional Screening Levels - May 2016 (Target Cancer Risk = 1E-06, Hazard Quotient 1.0)			Soil Sample ID															
			Residential	Industrial	Groundwater SSL	GC-1-1		GC-1-6		GC-2-1		GC-2-6		GC-3-1		GC-3-6		GC-4-1		GC-4-6	
						9/7/2016		9/7/2016		9/9/2016		9/9/2016		9/7/2016		9/9/2016		9/7/2016		9/9/2016	
						Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Pentachlorophenol	8270	µg/kg	1,000	4,000	1.4	<192,000		<19,100		1,980		<2,000		<2,020		<2,000		<2,070		<2,070	
2,3,4,6-Tetrachlorophenol	8270	µg/kg	190	2,500	0.18	5,010		<3,820		<369		<401		<403		<401		<413		<414	

Bold value indicates a detection above the reporting detection limit (RDL)

Groundwater soil screening level (SSL) is based on risk-based data (black font) or maximum contaminant level (MCL) data (red font)

Yellow shaded cell indicates detected concentration exceeds one or more of the screening criteria

Qual = laboratory result qualifier

Table 5
Summary of Groundwater Sample Analyses
March Lumber Company
Pamplico, South Carolina
S&ME Project No. 1584-98-146C

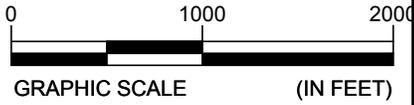
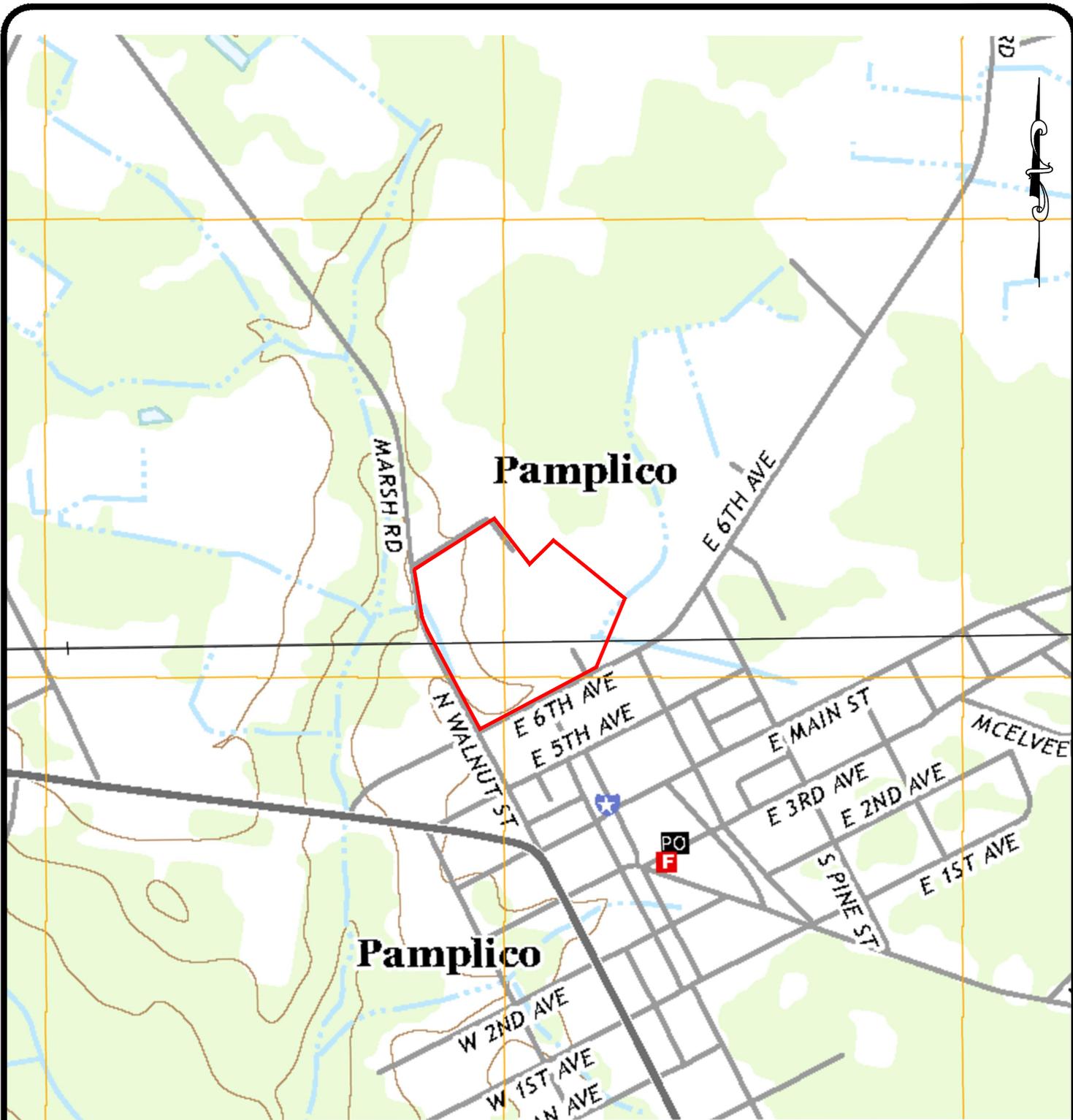
Sample Location	Date Collected	Method 8270 (BNA)		Bio-Sparge Laboratory Parameters		
		Pentachlorophenol (µg/L)	Benzoic Acid (µg/L)	Alkalinity (mg/L)	Chloride (mg/L)	Total Organic Carbon (mg/L)
MW-10	9/14/2016	<50	<50	302	12.0	1.9
MW-14	9/14/2016	214	<50	35.7	8.4	4.7
MW-15	9/14/2016	<50	<50	346	25.2	9.1
MW-17A	9/15/2016	<50	<50	not requested	not requested	not requested
MW-19	9/15/2016	<50	<50	not requested	not requested	not requested
MW-20	9/15/2016	<50	<50	not requested	not requested	not requested
MW-21	9/15/2016	16.6 J	<50	26.7	8.9	2.1
MW-22	9/15/2016	<50	<50	178	5.7	<1.0
MW-23	9/15/2016	<50	30.9 J	297	7.1	11.8
Duplicate	9/15/2016	21.5 J	<50	not requested	not requested	not requested
RSL - Tapwater		0.041	7,500	no standard	no standard	no standard
Maximum Contaminant Level (MCL)		1	no standard	no standard	no standard	no standard

J =concentration shown is estimated

Bold value indicates a detection above the reporting detection limit (RDL)

Yellow shaded cell indicates detected concentration is greater than the corresponding MCL

QA/QC sample "Duplicate" collected at MW-21



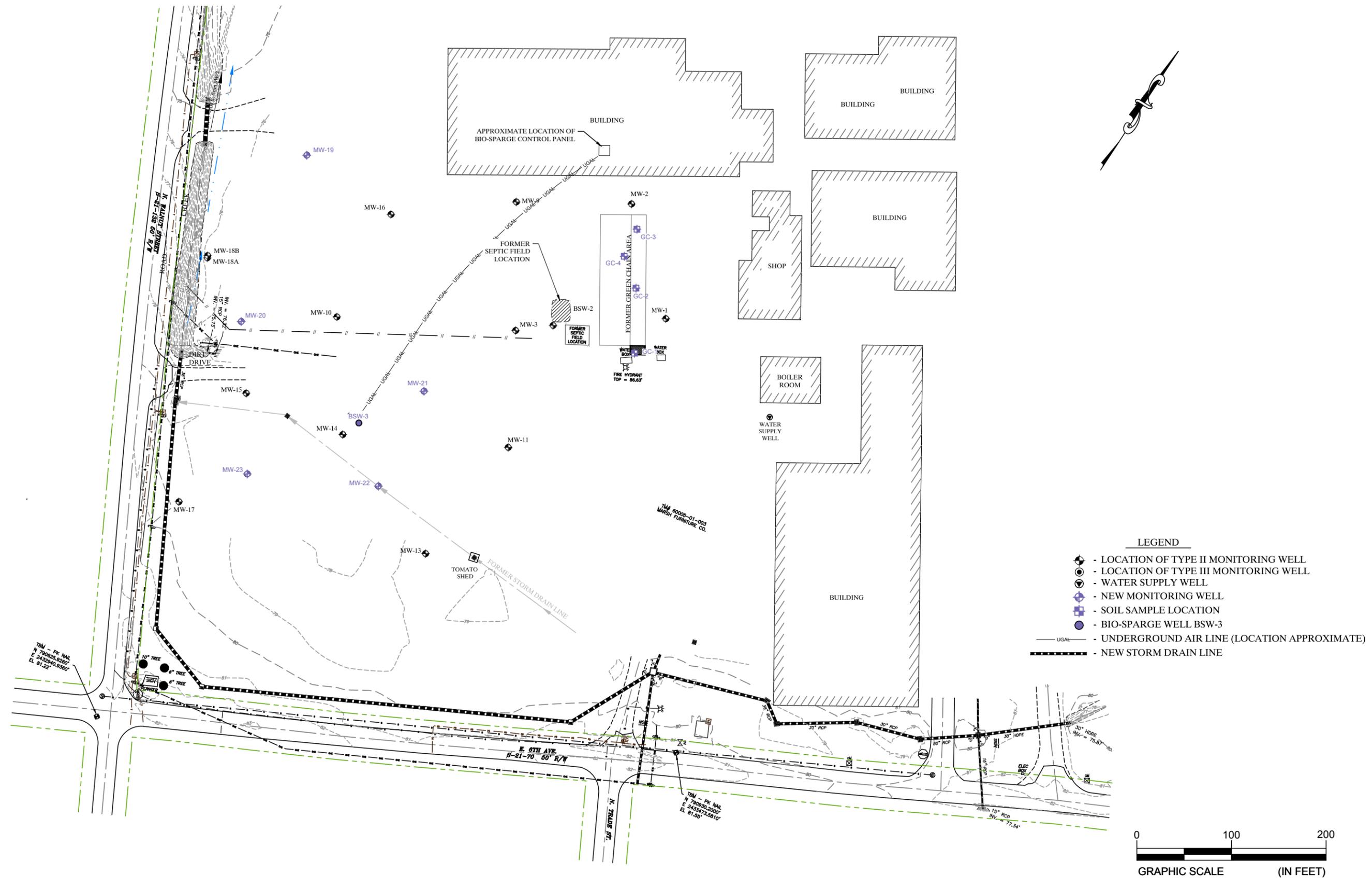
SOURCE: PAMPLICO NORTH, SC AND PAMPLICO SOUTH, SC, 7.5-MINUTE SERIES, USGS TOPOGRAPHIC MAPS (2014).

SCALE:	AS SHOWN
DATE:	MAY 2016
DRAWN BY:	RDM
PROJECT NO:	1584-98-146C

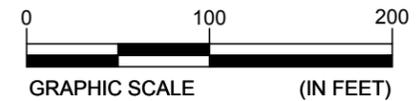


AREA TOPOGRAPHIC MAP
MARSH LUMBER
PAMPLICO, SOUTH CAROLINA

FIGURE NO.
1



- LEGEND**
- - LOCATION OF TYPE II MONITORING WELL
 - - LOCATION OF TYPE III MONITORING WELL
 - ⊙ - WATER SUPPLY WELL
 - ⊕ - NEW MONITORING WELL
 - ⊕ - SOIL SAMPLE LOCATION
 - ⊕ - BIO-SPARGE WELL BSW-3
 - - - UGAL - UNDERGROUND AIR LINE (LOCATION APPROXIMATE)
 - - - NEW STORM DRAIN LINE

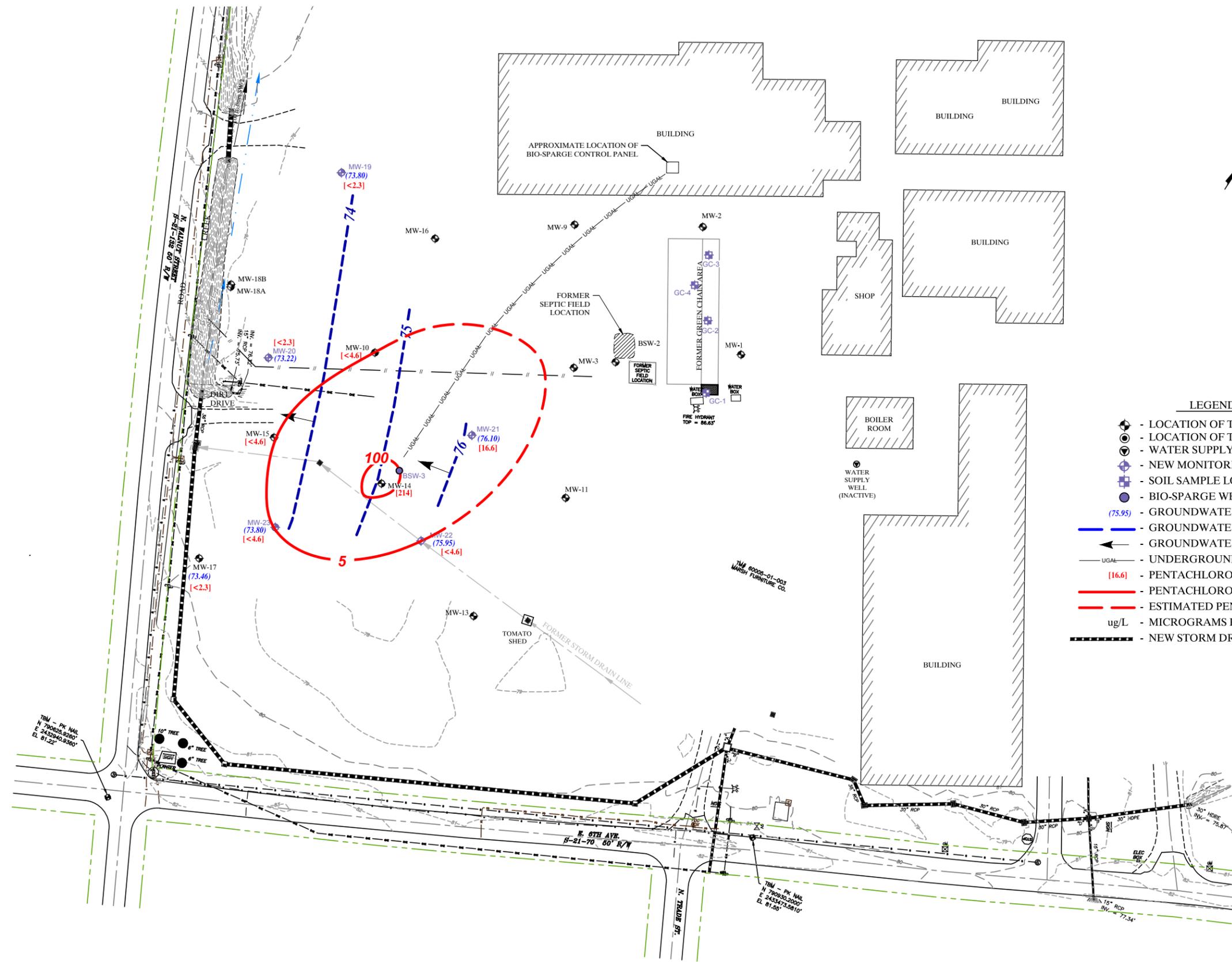


DATE:	OCT. 2016
SCALE:	AS SHOWN
PROJECT NO.:	1584-98-146C
DRAWN BY:	RDM

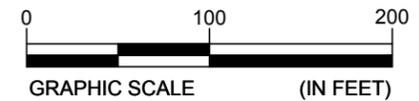


SITE PLAN
MARSH LUMBER
PAMPLICO, SOUTH CAROLINA

Drawing path: C:\158498\98-146 - MARSH LUMBER\C10-16\New Survey\Pamplico New Survey Site Plan.dwg



- LEGEND**
- - LOCATION OF TYPE II MONITORING WELL
 - - LOCATION OF TYPE III MONITORING WELL
 - - WATER SUPPLY WELL
 - ⊕ - NEW MONITORING WELL
 - ⊕ - SOIL SAMPLE LOCATION
 - ⊕ - BIO-SPARGE WELL BSW-3
 - (75.95) - GROUNDWATER ELEVATION (9/2016)
 - - GROUNDWATER SURFACE CONTOUR LINES
 - ← - GROUNDWATER FLOW DIRECTION
 - UGAL — - UNDERGROUND AIR LINE (LOCATION APPROXIMATE)
 - [16.6] - PENTACHLOROPHENOL CONCENTRATION IN ug/L (9/2016)
 - - PENTACHLOROPHENOL ISOCONCENTRATION CONTOUR
 - - - - ESTIMATED PENTACHLOROPHENOL ISOCONCENTRATION CONTOUR
 - ug/L - MICROGRAMS PER LITER
 - - - - NEW STORM DRAIN LINE



DATE:	OCT. 2016
SCALE:	AS SHOWN
PROJECT NO.:	1584-98-146C
DRAWN BY:	RDM



GROUNDWATER DATA DRAWING
 MARSH LUMBER
 PAMPLICO, SOUTH CAROLINA

Drawing path: C:\158498\98-146 - MARSH LUMBER\C10-16\New Survey\Pamplico New Survey Site Plan.dwg

Appendices

Appendix I – Laboratory Analytical Reports

September 23, 2016

Mr. Ed Henriques
S&ME, Inc.
8646 West Market Street
Suite 105
Greensboro, NC 27409

RE: Project: Marsh Pamplico
Pace Project No.: 92311939

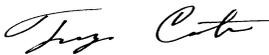
Dear Mr. Henriques:

Enclosed are the analytical results for sample(s) received by the laboratory on September 12, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Trey Carter
treycarter@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Marsh Pamplico

Pace Project No.: 92311939

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Marsh Pamplico

Pace Project No.: 92311939

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92311939001	GC-4-1	EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939002	GC-1-1	EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939003	GC-1-6	EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939004	GC-3-1	EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939005	GC-2-1	EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939006	GC-2-6	EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939007	GC-4-6	EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939008	GC-3-6	EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939009	D-1	EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A
		EPA 8270	BPJ	73	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92311939010	GC-2-1	EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C
92311939011	GC-2-6	EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C
92311939012	GC-4-6	EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C
92311939013	GC-3-6	EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C
92311939014	GC-1-1	EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C
92311939015	GC-1-6	EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Marsh Pamplico

Pace Project No.: 92311939

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92311939016	GC-4-1	ASTM D2974-87	KDF	1	PASI-C
		EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A
92311939017	GC-3-1	ASTM D2974-87	KDF	1	PASI-C
		EPA 6010	SH1	22	PASI-A
		EPA 7471	WAB	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Marsh Pamplico

Pace Project No.: 92311939

Method: EPA 6010

Description: 6010 MET ICP

Client: S&ME - Greensboro

Date: September 23, 2016

General Information:

9 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 328346

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92311651001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1819775)
 - Aluminum
 - Calcium
 - Iron
 - Manganese
- MSD (Lab ID: 1819776)
 - Aluminum
 - Iron
 - Magnesium
 - Manganese

R1: RPD value was outside control limits.

- MSD (Lab ID: 1819776)
 - Iron

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Marsh Pamplico

Pace Project No.: 92311939

Method: EPA 7471

Description: 7471 Mercury

Client: S&ME - Greensboro

Date: September 23, 2016

General Information:

9 samples were analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Marsh Pamplico

Pace Project No.: 92311939

Method: EPA 8270

Description: 8270 MSSV Microwave

Client: S&ME - Greensboro

Date: September 23, 2016

General Information:

9 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 328501

S0: Surrogate recovery outside laboratory control limits.

- MS (Lab ID: 1820775)
 - 2-Fluorobiphenyl (S)
 - Nitrobenzene-d5 (S)
 - Phenol-d6 (S)

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- GC-1-1 (Lab ID: 92311939002)
 - 2,4,6-Tribromophenol (S)
 - 2-Fluorobiphenyl (S)
 - 2-Fluorophenol (S)
 - Nitrobenzene-d5 (S)
 - Phenol-d6 (S)
 - Terphenyl-d14 (S)
- GC-1-6 (Lab ID: 92311939003)
 - 2,4,6-Tribromophenol (S)
 - 2-Fluorobiphenyl (S)
 - 2-Fluorophenol (S)
 - Nitrobenzene-d5 (S)
 - Phenol-d6 (S)
 - Terphenyl-d14 (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Marsh Pamplico

Pace Project No.: 92311939

Method: EPA 8270

Description: 8270 MSSV Microwave

Client: S&ME - Greensboro

Date: September 23, 2016

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 328501

LO: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1820774)
- Benzaldehyde

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 328501

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92311939008

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1820775)
- Benzaldehyde

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1820775)
- 1,2,4,5-Tetrachlorobenzene
- 2,2'-Oxybis(1-chloropropane)
- 2-Nitrophenol
- Acetophenone
- Atrazine
- Biphenyl (Diphenyl)
- Caprolactam
- Carbazole
- Isophorone
- N-Nitroso-di-n-propylamine
- Naphthalene

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 328501

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- GC-1-1 (Lab ID: 92311939002)
- 2-Fluorobiphenyl (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Marsh Pamplico

Pace Project No.: 92311939

Method: EPA 8270

Description: 8270 MSSV Microwave

Client: S&ME - Greensboro

Date: September 23, 2016

Analyte Comments:

QC Batch: 328501

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- GC-1-6 (Lab ID: 92311939003)
- 2-Fluorobiphenyl (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-4-1 **Lab ID: 92311939001** Collected: 09/07/16 11:26 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	83-32-9	
Acenaphthylene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	208-96-8	
Acetophenone	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	98-86-2	
Anthracene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	120-12-7	
Atrazine	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 17:26	1912-24-9	
Benzaldehyde	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 17:26	100-52-7	L2
Benzo(a)anthracene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	56-55-3	
Benzo(a)pyrene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	50-32-8	
Benzo(b)fluoranthene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	205-99-2	
Benzo(g,h,i)perylene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	191-24-2	
Benzo(k)fluoranthene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	207-08-9	
Biphenyl (Diphenyl)	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	92-52-4	
4-Bromophenylphenyl ether	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	101-55-3	
Butylbenzylphthalate	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	85-68-7	
Caprolactam	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	105-60-2	
Carbazole	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	86-74-8	
4-Chloro-3-methylphenol	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 17:26	59-50-7	
4-Chloroaniline	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 17:26	106-47-8	
bis(2-Chloroethoxy)methane	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	111-91-1	
bis(2-Chloroethyl) ether	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	111-44-4	
2-Chloronaphthalene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	91-58-7	
2-Chlorophenol	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	95-57-8	
4-Chlorophenylphenyl ether	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	7005-72-3	
Chrysene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	218-01-9	
Dibenz(a,h)anthracene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	53-70-3	
Dibenzofuran	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	132-64-9	
3,3'-Dichlorobenzidine	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 17:26	91-94-1	
2,4-Dichlorophenol	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	120-83-2	
Diethylphthalate	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	84-66-2	
2,4-Dimethylphenol	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	105-67-9	
Dimethylphthalate	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	131-11-3	
Di-n-butylphthalate	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	84-74-2	
4,6-Dinitro-2-methylphenol	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 17:26	534-52-1	
2,4-Dinitrophenol	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 17:26	51-28-5	
2,4-Dinitrotoluene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	121-14-2	
2,6-Dinitrotoluene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	606-20-2	
Di-n-octylphthalate	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	117-84-0	
bis(2-Ethylhexyl)phthalate	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	117-81-7	
Fluoranthene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	206-44-0	
Fluorene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	86-73-7	
Hexachloro-1,3-butadiene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	87-68-3	
Hexachlorobenzene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	118-74-1	
Hexachlorocyclopentadiene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	77-47-4	
Hexachloroethane	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	67-72-1	
Indeno(1,2,3-cd)pyrene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	193-39-5	
Isophorone	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	78-59-1	

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-4-1 **Lab ID:** 92311939001 Collected: 09/07/16 11:26 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
2-Methylnaphthalene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	91-57-6	
2-Methylphenol(o-Cresol)	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	95-48-7	
3&4-Methylphenol(m&p Cresol)	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26		
Naphthalene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	91-20-3	
2-Nitroaniline	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 17:26	88-74-4	
3-Nitroaniline	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 17:26	99-09-2	
4-Nitroaniline	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 17:26	100-01-6	
Nitrobenzene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	98-95-3	
2-Nitrophenol	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	88-75-5	
4-Nitrophenol	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 17:26	100-02-7	
N-Nitroso-di-n-propylamine	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	621-64-7	
N-Nitrosodiphenylamine	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	86-30-6	
2,2'-Oxybis(1-chloropropane)	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	108-60-1	
Pentachlorophenol	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 17:26	87-86-5	
Phenanthrene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	85-01-8	
Phenol	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26		
Pyrene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	129-00-0	
1,2,4,5-Tetrachlorobenzene	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	95-94-3	
2,3,4,6-Tetrachlorophenol	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	58-90-2	
2,4,5-Trichlorophenol	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	95-95-4	
2,4,6-Trichlorophenol	<413	ug/kg	413	1	09/14/16 14:30	09/19/16 17:26	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	52	%	30-110	1	09/14/16 14:30	09/19/16 17:26	321-60-8	
Terphenyl-d14 (S)	49	%	28-110	1	09/14/16 14:30	09/19/16 17:26	1718-51-0	
Phenol-d6 (S)	41	%	22-110	1	09/14/16 14:30	09/19/16 17:26	13127-88-3	
2-Fluorophenol (S)	35	%	13-110	1	09/14/16 14:30	09/19/16 17:26	367-12-4	
2,4,6-Tribromophenol (S)	50	%	27-110	1	09/14/16 14:30	09/19/16 17:26	118-79-6	
Nitrobenzene-d5 (S)	44	%	23-110	1	09/14/16 14:30	09/19/16 17:26	4165-60-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	20.2	%	0.10	1	09/14/16 09:21			
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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-1-1 **Lab ID:** 92311939002 Collected: 09/07/16 11:53 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	83-32-9	
Acenaphthylene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	208-96-8	
Acetophenone	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	98-86-2	
Anthracene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	120-12-7	
Atrazine	<7690	ug/kg	7690	10	09/14/16 14:30	09/23/16 11:42	1912-24-9	
Benzaldehyde	<7690	ug/kg	7690	10	09/14/16 14:30	09/23/16 11:42	100-52-7	L2
Benzo(a)anthracene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	56-55-3	
Benzo(a)pyrene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	50-32-8	
Benzo(b)fluoranthene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	205-99-2	
Benzo(g,h,i)perylene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	191-24-2	
Benzo(k)fluoranthene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	207-08-9	
Biphenyl (Diphenyl)	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	92-52-4	
4-Bromophenylphenyl ether	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	101-55-3	
Butylbenzylphthalate	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	85-68-7	
Caprolactam	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	105-60-2	
Carbazole	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	86-74-8	
4-Chloro-3-methylphenol	<7690	ug/kg	7690	10	09/14/16 14:30	09/23/16 11:42	59-50-7	
4-Chloroaniline	<19200	ug/kg	19200	10	09/14/16 14:30	09/23/16 11:42	106-47-8	
bis(2-Chloroethoxy)methane	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	111-91-1	
bis(2-Chloroethyl) ether	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	111-44-4	
2-Chloronaphthalene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	91-58-7	
2-Chlorophenol	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	95-57-8	
4-Chlorophenylphenyl ether	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	7005-72-3	
Chrysene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	218-01-9	
Dibenz(a,h)anthracene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	53-70-3	
Dibenzofuran	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	132-64-9	
3,3'-Dichlorobenzidine	<19200	ug/kg	19200	10	09/14/16 14:30	09/23/16 11:42	91-94-1	
2,4-Dichlorophenol	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	120-83-2	
Diethylphthalate	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	84-66-2	
2,4-Dimethylphenol	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	105-67-9	
Dimethylphthalate	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	131-11-3	
Di-n-butylphthalate	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	84-74-2	
4,6-Dinitro-2-methylphenol	<7690	ug/kg	7690	10	09/14/16 14:30	09/23/16 11:42	534-52-1	
2,4-Dinitrophenol	<19200	ug/kg	19200	10	09/14/16 14:30	09/23/16 11:42	51-28-5	
2,4-Dinitrotoluene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	121-14-2	
2,6-Dinitrotoluene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	606-20-2	
Di-n-octylphthalate	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	117-84-0	
bis(2-Ethylhexyl)phthalate	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	117-81-7	
Fluoranthene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	206-44-0	
Fluorene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	86-73-7	
Hexachloro-1,3-butadiene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	87-68-3	
Hexachlorobenzene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	118-74-1	
Hexachlorocyclopentadiene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	77-47-4	
Hexachloroethane	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	67-72-1	
Indeno(1,2,3-cd)pyrene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	193-39-5	
Isophorone	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	78-59-1	

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-1-1 **Lab ID:** 92311939002 Collected: 09/07/16 11:53 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
2-Methylnaphthalene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	91-57-6	
2-Methylphenol(o-Cresol)	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	95-48-7	
3&4-Methylphenol(m&p Cresol)	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42		
Naphthalene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	91-20-3	
2-Nitroaniline	<19200	ug/kg	19200	10	09/14/16 14:30	09/23/16 11:42	88-74-4	
3-Nitroaniline	<19200	ug/kg	19200	10	09/14/16 14:30	09/23/16 11:42	99-09-2	
4-Nitroaniline	<7690	ug/kg	7690	10	09/14/16 14:30	09/23/16 11:42	100-01-6	
Nitrobenzene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	98-95-3	
2-Nitrophenol	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	88-75-5	
4-Nitrophenol	<19200	ug/kg	19200	10	09/14/16 14:30	09/23/16 11:42	100-02-7	
N-Nitroso-di-n-propylamine	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	621-64-7	
N-Nitrosodiphenylamine	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	86-30-6	
2,2'-Oxybis(1-chloropropane)	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	108-60-1	
Pentachlorophenol	<192000	ug/kg	192000	100	09/14/16 14:30	09/23/16 15:06	87-86-5	
Phenanthrene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	85-01-8	
Phenol	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42		
Pyrene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	129-00-0	
1,2,4,5-Tetrachlorobenzene	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	95-94-3	
2,3,4,6-Tetrachlorophenol	5010	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	58-90-2	
2,4,5-Trichlorophenol	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	95-95-4	
2,4,6-Trichlorophenol	<3850	ug/kg	3850	10	09/14/16 14:30	09/23/16 11:42	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	0	%	30-110	10	09/14/16 14:30	09/23/16 11:42	321-60-8	D3,S4
Terphenyl-d14 (S)	0	%	28-110	10	09/14/16 14:30	09/23/16 11:42	1718-51-0	S4
Phenol-d6 (S)	0	%	22-110	10	09/14/16 14:30	09/23/16 11:42	13127-88-3	S4
2-Fluorophenol (S)	0	%	13-110	10	09/14/16 14:30	09/23/16 11:42	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110	10	09/14/16 14:30	09/23/16 11:42	118-79-6	S4
Nitrobenzene-d5 (S)	0	%	23-110	10	09/14/16 14:30	09/23/16 11:42	4165-60-0	S4

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	14.2	%	0.10	1	09/14/16 09:21			
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-1-6 **Lab ID: 92311939003** Collected: 09/07/16 13:36 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	83-32-9	
Acenaphthylene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	208-96-8	
Acetophenone	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	98-86-2	
Anthracene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	120-12-7	
Atrazine	<7640	ug/kg	7640	10	09/14/16 14:30	09/23/16 12:10	1912-24-9	
Benzaldehyde	<7640	ug/kg	7640	10	09/14/16 14:30	09/23/16 12:10	100-52-7	L2
Benzo(a)anthracene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	56-55-3	
Benzo(a)pyrene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	50-32-8	
Benzo(b)fluoranthene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	205-99-2	
Benzo(g,h,i)perylene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	191-24-2	
Benzo(k)fluoranthene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	207-08-9	
Biphenyl (Diphenyl)	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	92-52-4	
4-Bromophenylphenyl ether	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	101-55-3	
Butylbenzylphthalate	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	85-68-7	
Caprolactam	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	105-60-2	
Carbazole	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	86-74-8	
4-Chloro-3-methylphenol	<7640	ug/kg	7640	10	09/14/16 14:30	09/23/16 12:10	59-50-7	
4-Chloroaniline	<19100	ug/kg	19100	10	09/14/16 14:30	09/23/16 12:10	106-47-8	
bis(2-Chloroethoxy)methane	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	111-91-1	
bis(2-Chloroethyl) ether	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	111-44-4	
2-Chloronaphthalene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	91-58-7	
2-Chlorophenol	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	95-57-8	
4-Chlorophenylphenyl ether	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	7005-72-3	
Chrysene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	218-01-9	
Dibenz(a,h)anthracene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	53-70-3	
Dibenzofuran	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	132-64-9	
3,3'-Dichlorobenzidine	<19100	ug/kg	19100	10	09/14/16 14:30	09/23/16 12:10	91-94-1	
2,4-Dichlorophenol	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	120-83-2	
Diethylphthalate	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	84-66-2	
2,4-Dimethylphenol	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	105-67-9	
Dimethylphthalate	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	131-11-3	
Di-n-butylphthalate	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	84-74-2	
4,6-Dinitro-2-methylphenol	<7640	ug/kg	7640	10	09/14/16 14:30	09/23/16 12:10	534-52-1	
2,4-Dinitrophenol	<19100	ug/kg	19100	10	09/14/16 14:30	09/23/16 12:10	51-28-5	
2,4-Dinitrotoluene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	121-14-2	
2,6-Dinitrotoluene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	606-20-2	
Di-n-octylphthalate	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	117-84-0	
bis(2-Ethylhexyl)phthalate	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	117-81-7	
Fluoranthene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	206-44-0	
Fluorene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	86-73-7	
Hexachloro-1,3-butadiene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	87-68-3	
Hexachlorobenzene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	118-74-1	
Hexachlorocyclopentadiene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	77-47-4	
Hexachloroethane	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	67-72-1	
Indeno(1,2,3-cd)pyrene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	193-39-5	
Isophorone	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	78-59-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-1-6 Lab ID: 92311939003 Collected: 09/07/16 13:36 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
2-Methylnaphthalene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	91-57-6	
2-Methylphenol(o-Cresol)	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	95-48-7	
3&4-Methylphenol(m&p Cresol)	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10		
Naphthalene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	91-20-3	
2-Nitroaniline	<19100	ug/kg	19100	10	09/14/16 14:30	09/23/16 12:10	88-74-4	
3-Nitroaniline	<19100	ug/kg	19100	10	09/14/16 14:30	09/23/16 12:10	99-09-2	
4-Nitroaniline	<7640	ug/kg	7640	10	09/14/16 14:30	09/23/16 12:10	100-01-6	
Nitrobenzene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	98-95-3	
2-Nitrophenol	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	88-75-5	
4-Nitrophenol	<19100	ug/kg	19100	10	09/14/16 14:30	09/23/16 12:10	100-02-7	
N-Nitroso-di-n-propylamine	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	621-64-7	
N-Nitrosodiphenylamine	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	86-30-6	
2,2'-Oxybis(1-chloropropane)	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	108-60-1	
Pentachlorophenol	<19100	ug/kg	19100	10	09/14/16 14:30	09/23/16 12:10	87-86-5	
Phenanthrene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	85-01-8	
Phenol	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10		
Pyrene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	129-00-0	
1,2,4,5-Tetrachlorobenzene	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	95-94-3	
2,3,4,6-Tetrachlorophenol	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	58-90-2	
2,4,5-Trichlorophenol	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	95-95-4	
2,4,6-Trichlorophenol	<3820	ug/kg	3820	10	09/14/16 14:30	09/23/16 12:10	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	0	%	30-110	10	09/14/16 14:30	09/23/16 12:10	321-60-8	D3,S4
Terphenyl-d14 (S)	0	%	28-110	10	09/14/16 14:30	09/23/16 12:10	1718-51-0	S4
Phenol-d6 (S)	0	%	22-110	10	09/14/16 14:30	09/23/16 12:10	13127-88-3	S4
2-Fluorophenol (S)	0	%	13-110	10	09/14/16 14:30	09/23/16 12:10	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110	10	09/14/16 14:30	09/23/16 12:10	118-79-6	S4
Nitrobenzene-d5 (S)	0	%	23-110	10	09/14/16 14:30	09/23/16 12:10	4165-60-0	S4

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	13.6	%	0.10	1	09/14/16 09:21			
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Marsh Pamplico
Pace Project No.: 92311939

Sample: GC-3-1 **Lab ID: 92311939004** Collected: 09/07/16 13:56 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	83-32-9	
Acenaphthylene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	208-96-8	
Acetophenone	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	98-86-2	
Anthracene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	120-12-7	
Atrazine	<806	ug/kg	806	1	09/14/16 14:30	09/23/16 10:46	1912-24-9	
Benzaldehyde	<806	ug/kg	806	1	09/14/16 14:30	09/23/16 10:46	100-52-7	L2
Benzo(a)anthracene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	56-55-3	
Benzo(a)pyrene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	50-32-8	
Benzo(b)fluoranthene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	205-99-2	
Benzo(g,h,i)perylene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	191-24-2	
Benzo(k)fluoranthene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	207-08-9	
Biphenyl (Diphenyl)	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	92-52-4	
4-Bromophenylphenyl ether	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	101-55-3	
Butylbenzylphthalate	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	85-68-7	
Caprolactam	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	105-60-2	
Carbazole	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	86-74-8	
4-Chloro-3-methylphenol	<806	ug/kg	806	1	09/14/16 14:30	09/23/16 10:46	59-50-7	
4-Chloroaniline	<2020	ug/kg	2020	1	09/14/16 14:30	09/23/16 10:46	106-47-8	
bis(2-Chloroethoxy)methane	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	111-91-1	
bis(2-Chloroethyl) ether	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	111-44-4	
2-Chloronaphthalene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	91-58-7	
2-Chlorophenol	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	95-57-8	
4-Chlorophenylphenyl ether	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	7005-72-3	
Chrysene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	218-01-9	
Dibenz(a,h)anthracene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	53-70-3	
Dibenzofuran	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	132-64-9	
3,3'-Dichlorobenzidine	<2020	ug/kg	2020	1	09/14/16 14:30	09/23/16 10:46	91-94-1	
2,4-Dichlorophenol	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	120-83-2	
Diethylphthalate	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	84-66-2	
2,4-Dimethylphenol	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	105-67-9	
Dimethylphthalate	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	131-11-3	
Di-n-butylphthalate	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	84-74-2	
4,6-Dinitro-2-methylphenol	<806	ug/kg	806	1	09/14/16 14:30	09/23/16 10:46	534-52-1	
2,4-Dinitrophenol	<2020	ug/kg	2020	1	09/14/16 14:30	09/23/16 10:46	51-28-5	
2,4-Dinitrotoluene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	121-14-2	
2,6-Dinitrotoluene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	606-20-2	
Di-n-octylphthalate	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	117-84-0	
bis(2-Ethylhexyl)phthalate	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	117-81-7	
Fluoranthene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	206-44-0	
Fluorene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	86-73-7	
Hexachloro-1,3-butadiene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	87-68-3	
Hexachlorobenzene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	118-74-1	
Hexachlorocyclopentadiene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	77-47-4	
Hexachloroethane	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	67-72-1	
Indeno(1,2,3-cd)pyrene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	193-39-5	
Isophorone	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	78-59-1	

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-3-1 **Lab ID: 92311939004** Collected: 09/07/16 13:56 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
2-Methylnaphthalene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	91-57-6	
2-Methylphenol(o-Cresol)	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	95-48-7	
3&4-Methylphenol(m&p Cresol)	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46		
Naphthalene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	91-20-3	
2-Nitroaniline	<2020	ug/kg	2020	1	09/14/16 14:30	09/23/16 10:46	88-74-4	
3-Nitroaniline	<2020	ug/kg	2020	1	09/14/16 14:30	09/23/16 10:46	99-09-2	
4-Nitroaniline	<806	ug/kg	806	1	09/14/16 14:30	09/23/16 10:46	100-01-6	
Nitrobenzene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	98-95-3	
2-Nitrophenol	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	88-75-5	
4-Nitrophenol	<2020	ug/kg	2020	1	09/14/16 14:30	09/23/16 10:46	100-02-7	
N-Nitroso-di-n-propylamine	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	621-64-7	
N-Nitrosodiphenylamine	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	86-30-6	
2,2'-Oxybis(1-chloropropane)	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	108-60-1	
Pentachlorophenol	<2020	ug/kg	2020	1	09/14/16 14:30	09/23/16 10:46	87-86-5	
Phenanthrene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	85-01-8	
Phenol	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46		
Pyrene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	129-00-0	
1,2,4,5-Tetrachlorobenzene	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	95-94-3	
2,3,4,6-Tetrachlorophenol	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	58-90-2	
2,4,5-Trichlorophenol	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	95-95-4	
2,4,6-Trichlorophenol	<403	ug/kg	403	1	09/14/16 14:30	09/23/16 10:46	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	58	%	30-110	1	09/14/16 14:30	09/23/16 10:46	321-60-8	
Terphenyl-d14 (S)	56	%	28-110	1	09/14/16 14:30	09/23/16 10:46	1718-51-0	
Phenol-d6 (S)	43	%	22-110	1	09/14/16 14:30	09/23/16 10:46	13127-88-3	
2-Fluorophenol (S)	43	%	13-110	1	09/14/16 14:30	09/23/16 10:46	367-12-4	
2,4,6-Tribromophenol (S)	58	%	27-110	1	09/14/16 14:30	09/23/16 10:46	118-79-6	
Nitrobenzene-d5 (S)	57	%	23-110	1	09/14/16 14:30	09/23/16 10:46	4165-60-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	18.2	%	0.10	1	09/14/16 09:21			
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-2-1 Lab ID: 92311939005 Collected: 09/09/16 14:13 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	83-32-9	
Acenaphthylene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	208-96-8	
Acetophenone	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	98-86-2	
Anthracene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	120-12-7	
Atrazine	<738	ug/kg	738	1	09/14/16 14:30	09/23/16 11:14	1912-24-9	
Benzaldehyde	<738	ug/kg	738	1	09/14/16 14:30	09/23/16 11:14	100-52-7	L2
Benzo(a)anthracene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	56-55-3	
Benzo(a)pyrene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	50-32-8	
Benzo(b)fluoranthene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	205-99-2	
Benzo(g,h,i)perylene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	191-24-2	
Benzo(k)fluoranthene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	207-08-9	
Biphenyl (Diphenyl)	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	92-52-4	
4-Bromophenylphenyl ether	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	101-55-3	
Butylbenzylphthalate	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	85-68-7	
Caprolactam	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	105-60-2	
Carbazole	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	86-74-8	
4-Chloro-3-methylphenol	<738	ug/kg	738	1	09/14/16 14:30	09/23/16 11:14	59-50-7	
4-Chloroaniline	<1840	ug/kg	1840	1	09/14/16 14:30	09/23/16 11:14	106-47-8	
bis(2-Chloroethoxy)methane	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	111-91-1	
bis(2-Chloroethyl) ether	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	111-44-4	
2-Chloronaphthalene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	91-58-7	
2-Chlorophenol	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	95-57-8	
4-Chlorophenylphenyl ether	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	7005-72-3	
Chrysene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	218-01-9	
Dibenz(a,h)anthracene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	53-70-3	
Dibenzofuran	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	132-64-9	
3,3'-Dichlorobenzidine	<1840	ug/kg	1840	1	09/14/16 14:30	09/23/16 11:14	91-94-1	
2,4-Dichlorophenol	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	120-83-2	
Diethylphthalate	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	84-66-2	
2,4-Dimethylphenol	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	105-67-9	
Dimethylphthalate	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	131-11-3	
Di-n-butylphthalate	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	84-74-2	
4,6-Dinitro-2-methylphenol	<738	ug/kg	738	1	09/14/16 14:30	09/23/16 11:14	534-52-1	
2,4-Dinitrophenol	<1840	ug/kg	1840	1	09/14/16 14:30	09/23/16 11:14	51-28-5	
2,4-Dinitrotoluene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	121-14-2	
2,6-Dinitrotoluene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	606-20-2	
Di-n-octylphthalate	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	117-84-0	
bis(2-Ethylhexyl)phthalate	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	117-81-7	
Fluoranthene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	206-44-0	
Fluorene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	86-73-7	
Hexachloro-1,3-butadiene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	87-68-3	
Hexachlorobenzene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	118-74-1	
Hexachlorocyclopentadiene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	77-47-4	
Hexachloroethane	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	67-72-1	
Indeno(1,2,3-cd)pyrene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	193-39-5	
Isophorone	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	78-59-1	

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-2-1 **Lab ID: 92311939005** Collected: 09/09/16 14:13 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
2-Methylnaphthalene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	91-57-6	
2-Methylphenol(o-Cresol)	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	95-48-7	
3&4-Methylphenol(m&p Cresol)	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14		
Naphthalene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	91-20-3	
2-Nitroaniline	<1840	ug/kg	1840	1	09/14/16 14:30	09/23/16 11:14	88-74-4	
3-Nitroaniline	<1840	ug/kg	1840	1	09/14/16 14:30	09/23/16 11:14	99-09-2	
4-Nitroaniline	<738	ug/kg	738	1	09/14/16 14:30	09/23/16 11:14	100-01-6	
Nitrobenzene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	98-95-3	
2-Nitrophenol	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	88-75-5	
4-Nitrophenol	<1840	ug/kg	1840	1	09/14/16 14:30	09/23/16 11:14	100-02-7	
N-Nitroso-di-n-propylamine	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	621-64-7	
N-Nitrosodiphenylamine	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	86-30-6	
2,2'-Oxybis(1-chloropropane)	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	108-60-1	
Pentachlorophenol	1980	ug/kg	1840	1	09/14/16 14:30	09/23/16 11:14	87-86-5	
Phenanthrene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	85-01-8	
Phenol	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14		
Pyrene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	129-00-0	
1,2,4,5-Tetrachlorobenzene	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	95-94-3	
2,3,4,6-Tetrachlorophenol	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	58-90-2	
2,4,5-Trichlorophenol	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	95-95-4	
2,4,6-Trichlorophenol	<369	ug/kg	369	1	09/14/16 14:30	09/23/16 11:14	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	49	%	30-110	1	09/14/16 14:30	09/23/16 11:14	321-60-8	
Terphenyl-d14 (S)	58	%	28-110	1	09/14/16 14:30	09/23/16 11:14	1718-51-0	
Phenol-d6 (S)	42	%	22-110	1	09/14/16 14:30	09/23/16 11:14	13127-88-3	
2-Fluorophenol (S)	31	%	13-110	1	09/14/16 14:30	09/23/16 11:14	367-12-4	
2,4,6-Tribromophenol (S)	44	%	27-110	1	09/14/16 14:30	09/23/16 11:14	118-79-6	
Nitrobenzene-d5 (S)	45	%	23-110	1	09/14/16 14:30	09/23/16 11:14	4165-60-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	10.6	%	0.10	1	09/14/16 09:21			
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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-2-6 **Lab ID: 92311939006** Collected: 09/09/16 14:16 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	83-32-9	
Acenaphthylene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	208-96-8	
Acetophenone	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	98-86-2	
Anthracene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	120-12-7	
Atrazine	<802	ug/kg	802	1	09/14/16 14:30	09/19/16 19:46	1912-24-9	
Benzaldehyde	<802	ug/kg	802	1	09/14/16 14:30	09/19/16 19:46	100-52-7	L2
Benzo(a)anthracene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	56-55-3	
Benzo(a)pyrene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	50-32-8	
Benzo(b)fluoranthene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	205-99-2	
Benzo(g,h,i)perylene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	191-24-2	
Benzo(k)fluoranthene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	207-08-9	
Biphenyl (Diphenyl)	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	92-52-4	
4-Bromophenylphenyl ether	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	101-55-3	
Butylbenzylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	85-68-7	
Caprolactam	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	105-60-2	
Carbazole	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	86-74-8	
4-Chloro-3-methylphenol	<802	ug/kg	802	1	09/14/16 14:30	09/19/16 19:46	59-50-7	
4-Chloroaniline	<2000	ug/kg	2000	1	09/14/16 14:30	09/19/16 19:46	106-47-8	
bis(2-Chloroethoxy)methane	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	111-91-1	
bis(2-Chloroethyl) ether	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	111-44-4	
2-Chloronaphthalene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	91-58-7	
2-Chlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	95-57-8	
4-Chlorophenylphenyl ether	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	7005-72-3	
Chrysene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	218-01-9	
Dibenz(a,h)anthracene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	53-70-3	
Dibenzofuran	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	132-64-9	
3,3'-Dichlorobenzidine	<2000	ug/kg	2000	1	09/14/16 14:30	09/19/16 19:46	91-94-1	
2,4-Dichlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	120-83-2	
Diethylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	84-66-2	
2,4-Dimethylphenol	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	105-67-9	
Dimethylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	131-11-3	
Di-n-butylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	84-74-2	
4,6-Dinitro-2-methylphenol	<802	ug/kg	802	1	09/14/16 14:30	09/19/16 19:46	534-52-1	
2,4-Dinitrophenol	<2000	ug/kg	2000	1	09/14/16 14:30	09/19/16 19:46	51-28-5	
2,4-Dinitrotoluene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	121-14-2	
2,6-Dinitrotoluene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	606-20-2	
Di-n-octylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	117-84-0	
bis(2-Ethylhexyl)phthalate	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	117-81-7	
Fluoranthene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	206-44-0	
Fluorene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	86-73-7	
Hexachloro-1,3-butadiene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	87-68-3	
Hexachlorobenzene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	118-74-1	
Hexachlorocyclopentadiene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	77-47-4	
Hexachloroethane	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	67-72-1	
Indeno(1,2,3-cd)pyrene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	193-39-5	
Isophorone	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	78-59-1	

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-2-6 **Lab ID: 92311939006** Collected: 09/09/16 14:16 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
2-Methylnaphthalene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	91-57-6	
2-Methylphenol(o-Cresol)	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	95-48-7	
3&4-Methylphenol(m&p Cresol)	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46		
Naphthalene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	91-20-3	
2-Nitroaniline	<2000	ug/kg	2000	1	09/14/16 14:30	09/19/16 19:46	88-74-4	
3-Nitroaniline	<2000	ug/kg	2000	1	09/14/16 14:30	09/19/16 19:46	99-09-2	
4-Nitroaniline	<802	ug/kg	802	1	09/14/16 14:30	09/19/16 19:46	100-01-6	
Nitrobenzene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	98-95-3	
2-Nitrophenol	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	88-75-5	
4-Nitrophenol	<2000	ug/kg	2000	1	09/14/16 14:30	09/19/16 19:46	100-02-7	
N-Nitroso-di-n-propylamine	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	621-64-7	
N-Nitrosodiphenylamine	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	86-30-6	
2,2'-Oxybis(1-chloropropane)	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	108-60-1	
Pentachlorophenol	<2000	ug/kg	2000	1	09/14/16 14:30	09/19/16 19:46	87-86-5	
Phenanthrene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	85-01-8	
Phenol	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46		
Pyrene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	129-00-0	
1,2,4,5-Tetrachlorobenzene	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	95-94-3	
2,3,4,6-Tetrachlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	58-90-2	
2,4,5-Trichlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	95-95-4	
2,4,6-Trichlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/19/16 19:46	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	65	%	30-110	1	09/14/16 14:30	09/19/16 19:46	321-60-8	
Terphenyl-d14 (S)	75	%	28-110	1	09/14/16 14:30	09/19/16 19:46	1718-51-0	
Phenol-d6 (S)	74	%	22-110	1	09/14/16 14:30	09/19/16 19:46	13127-88-3	
2-Fluorophenol (S)	69	%	13-110	1	09/14/16 14:30	09/19/16 19:46	367-12-4	
2,4,6-Tribromophenol (S)	82	%	27-110	1	09/14/16 14:30	09/19/16 19:46	118-79-6	
Nitrobenzene-d5 (S)	69	%	23-110	1	09/14/16 14:30	09/19/16 19:46	4165-60-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	17.7	%	0.10	1	09/14/16 09:22			
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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-4-6 **Lab ID: 92311939007** Collected: 09/09/16 14:23 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	83-32-9	
Acenaphthylene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	208-96-8	
Acetophenone	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	98-86-2	
Anthracene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	120-12-7	
Atrazine	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 20:15	1912-24-9	
Benzaldehyde	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 20:15	100-52-7	L2
Benzo(a)anthracene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	56-55-3	
Benzo(a)pyrene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	50-32-8	
Benzo(b)fluoranthene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	205-99-2	
Benzo(g,h,i)perylene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	191-24-2	
Benzo(k)fluoranthene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	207-08-9	
Biphenyl (Diphenyl)	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	92-52-4	
4-Bromophenylphenyl ether	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	101-55-3	
Butylbenzylphthalate	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	85-68-7	
Caprolactam	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	105-60-2	
Carbazole	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	86-74-8	
4-Chloro-3-methylphenol	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 20:15	59-50-7	
4-Chloroaniline	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 20:15	106-47-8	
bis(2-Chloroethoxy)methane	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	111-91-1	
bis(2-Chloroethyl) ether	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	111-44-4	
2-Chloronaphthalene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	91-58-7	
2-Chlorophenol	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	95-57-8	
4-Chlorophenylphenyl ether	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	7005-72-3	
Chrysene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	218-01-9	
Dibenz(a,h)anthracene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	53-70-3	
Dibenzofuran	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	132-64-9	
3,3'-Dichlorobenzidine	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 20:15	91-94-1	
2,4-Dichlorophenol	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	120-83-2	
Diethylphthalate	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	84-66-2	
2,4-Dimethylphenol	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	105-67-9	
Dimethylphthalate	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	131-11-3	
Di-n-butylphthalate	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	84-74-2	
4,6-Dinitro-2-methylphenol	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 20:15	534-52-1	
2,4-Dinitrophenol	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 20:15	51-28-5	
2,4-Dinitrotoluene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	121-14-2	
2,6-Dinitrotoluene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	606-20-2	
Di-n-octylphthalate	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	117-84-0	
bis(2-Ethylhexyl)phthalate	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	117-81-7	
Fluoranthene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	206-44-0	
Fluorene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	86-73-7	
Hexachloro-1,3-butadiene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	87-68-3	
Hexachlorobenzene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	118-74-1	
Hexachlorocyclopentadiene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	77-47-4	
Hexachloroethane	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	67-72-1	
Indeno(1,2,3-cd)pyrene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	193-39-5	
Isophorone	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	78-59-1	

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-4-6 **Lab ID: 92311939007** Collected: 09/09/16 14:23 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
2-Methylnaphthalene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	91-57-6	
2-Methylphenol(o-Cresol)	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	95-48-7	
3&4-Methylphenol(m&p Cresol)	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15		
Naphthalene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	91-20-3	
2-Nitroaniline	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 20:15	88-74-4	
3-Nitroaniline	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 20:15	99-09-2	
4-Nitroaniline	<827	ug/kg	827	1	09/14/16 14:30	09/19/16 20:15	100-01-6	
Nitrobenzene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	98-95-3	
2-Nitrophenol	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	88-75-5	
4-Nitrophenol	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 20:15	100-02-7	
N-Nitroso-di-n-propylamine	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	621-64-7	
N-Nitrosodiphenylamine	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	86-30-6	
2,2'-Oxybis(1-chloropropane)	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	108-60-1	
Pentachlorophenol	<2070	ug/kg	2070	1	09/14/16 14:30	09/19/16 20:15	87-86-5	
Phenanthrene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	85-01-8	
Phenol	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15		
Pyrene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	129-00-0	
1,2,4,5-Tetrachlorobenzene	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	95-94-3	
2,3,4,6-Tetrachlorophenol	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	58-90-2	
2,4,5-Trichlorophenol	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	95-95-4	
2,4,6-Trichlorophenol	<414	ug/kg	414	1	09/14/16 14:30	09/19/16 20:15	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	72	%	30-110	1	09/14/16 14:30	09/19/16 20:15	321-60-8	
Terphenyl-d14 (S)	79	%	28-110	1	09/14/16 14:30	09/19/16 20:15	1718-51-0	
Phenol-d6 (S)	78	%	22-110	1	09/14/16 14:30	09/19/16 20:15	13127-88-3	
2-Fluorophenol (S)	74	%	13-110	1	09/14/16 14:30	09/19/16 20:15	367-12-4	
2,4,6-Tribromophenol (S)	87	%	27-110	1	09/14/16 14:30	09/19/16 20:15	118-79-6	
Nitrobenzene-d5 (S)	67	%	23-110	1	09/14/16 14:30	09/19/16 20:15	4165-60-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	20.2	%	0.10	1	09/14/16 09:22			
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Marsh Pamplico
Pace Project No.: 92311939

Sample: GC-3-6 Lab ID: 92311939008 Collected: 09/09/16 14:30 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	83-32-9	
Acenaphthylene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	208-96-8	
Acetophenone	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	98-86-2	M1
Anthracene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	120-12-7	
Atrazine	<802	ug/kg	802	1	09/14/16 14:30	09/21/16 19:41	1912-24-9	M1
Benzaldehyde	<802	ug/kg	802	1	09/14/16 14:30	09/21/16 19:41	100-52-7	L2,M0
Benzo(a)anthracene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	56-55-3	
Benzo(a)pyrene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	50-32-8	
Benzo(b)fluoranthene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	205-99-2	
Benzo(g,h,i)perylene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	191-24-2	
Benzo(k)fluoranthene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	207-08-9	
Biphenyl (Diphenyl)	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	92-52-4	M1
4-Bromophenylphenyl ether	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	101-55-3	
Butylbenzylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	85-68-7	
Caprolactam	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	105-60-2	M1
Carbazole	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	86-74-8	M1
4-Chloro-3-methylphenol	<802	ug/kg	802	1	09/14/16 14:30	09/21/16 19:41	59-50-7	
4-Chloroaniline	<2000	ug/kg	2000	1	09/14/16 14:30	09/21/16 19:41	106-47-8	
bis(2-Chloroethoxy)methane	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	111-91-1	
bis(2-Chloroethyl) ether	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	111-44-4	
2-Chloronaphthalene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	91-58-7	
2-Chlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	95-57-8	
4-Chlorophenylphenyl ether	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	7005-72-3	
Chrysene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	218-01-9	
Dibenz(a,h)anthracene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	53-70-3	
Dibenzofuran	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	132-64-9	
3,3'-Dichlorobenzidine	<2000	ug/kg	2000	1	09/14/16 14:30	09/21/16 19:41	91-94-1	
2,4-Dichlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	120-83-2	
Diethylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	84-66-2	
2,4-Dimethylphenol	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	105-67-9	
Dimethylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	131-11-3	
Di-n-butylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	84-74-2	
4,6-Dinitro-2-methylphenol	<802	ug/kg	802	1	09/14/16 14:30	09/21/16 19:41	534-52-1	
2,4-Dinitrophenol	<2000	ug/kg	2000	1	09/14/16 14:30	09/21/16 19:41	51-28-5	
2,4-Dinitrotoluene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	121-14-2	
2,6-Dinitrotoluene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	606-20-2	
Di-n-octylphthalate	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	117-84-0	
bis(2-Ethylhexyl)phthalate	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	117-81-7	
Fluoranthene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	206-44-0	
Fluorene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	86-73-7	
Hexachloro-1,3-butadiene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	87-68-3	
Hexachlorobenzene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	118-74-1	
Hexachlorocyclopentadiene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	77-47-4	
Hexachloroethane	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	67-72-1	
Indeno(1,2,3-cd)pyrene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	193-39-5	
Isophorone	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	78-59-1	M1

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-3-6 **Lab ID: 92311939008** Collected: 09/09/16 14:30 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave Analytical Method: EPA 8270 Preparation Method: EPA 3546								
2-Methylnaphthalene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	91-57-6	
2-Methylphenol(o-Cresol)	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	95-48-7	
3&4-Methylphenol(m&p Cresol)	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41		
Naphthalene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	91-20-3	M1
2-Nitroaniline	<2000	ug/kg	2000	1	09/14/16 14:30	09/21/16 19:41	88-74-4	
3-Nitroaniline	<2000	ug/kg	2000	1	09/14/16 14:30	09/21/16 19:41	99-09-2	
4-Nitroaniline	<802	ug/kg	802	1	09/14/16 14:30	09/21/16 19:41	100-01-6	
Nitrobenzene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	98-95-3	
2-Nitrophenol	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	88-75-5	M1
4-Nitrophenol	<2000	ug/kg	2000	1	09/14/16 14:30	09/21/16 19:41	100-02-7	
N-Nitroso-di-n-propylamine	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	621-64-7	M1
N-Nitrosodiphenylamine	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	86-30-6	
2,2'-Oxybis(1-chloropropane)	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	108-60-1	M1
Pentachlorophenol	<2000	ug/kg	2000	1	09/14/16 14:30	09/21/16 19:41	87-86-5	
Phenanthrene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	85-01-8	
Phenol	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41		
Pyrene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	129-00-0	
1,2,4,5-Tetrachlorobenzene	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	95-94-3	M1
2,3,4,6-Tetrachlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	58-90-2	
2,4,5-Trichlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	95-95-4	
2,4,6-Trichlorophenol	<401	ug/kg	401	1	09/14/16 14:30	09/21/16 19:41	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	70	%	30-110	1	09/14/16 14:30	09/21/16 19:41	321-60-8	
Terphenyl-d14 (S)	80	%	28-110	1	09/14/16 14:30	09/21/16 19:41	1718-51-0	
Phenol-d6 (S)	67	%	22-110	1	09/14/16 14:30	09/21/16 19:41	13127-88-3	
2-Fluorophenol (S)	66	%	13-110	1	09/14/16 14:30	09/21/16 19:41	367-12-4	
2,4,6-Tribromophenol (S)	73	%	27-110	1	09/14/16 14:30	09/21/16 19:41	118-79-6	
Nitrobenzene-d5 (S)	64	%	23-110	1	09/14/16 14:30	09/21/16 19:41	4165-60-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	17.7	%	0.10	1		09/14/16 09:22		
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ANALYTICAL RESULTS

Project: Marsh Pamplico
Pace Project No.: 92311939

Sample: D-1 **Lab ID: 92311939009** Collected: 09/09/16 14:45 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	3440	mg/kg	8.6	1	09/13/16 22:15	09/14/16 11:34	7429-90-5	
Antimony	<0.43	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7440-36-0	
Arsenic	1.4	mg/kg	0.86	1	09/13/16 22:15	09/14/16 11:34	7440-38-2	
Barium	12.5	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7440-39-3	
Beryllium	0.16	mg/kg	0.086	1	09/13/16 22:15	09/14/16 11:34	7440-41-7	
Cadmium	<0.086	mg/kg	0.086	1	09/13/16 22:15	09/14/16 11:34	7440-43-9	
Calcium	832	mg/kg	8.6	1	09/13/16 22:15	09/14/16 11:34	7440-70-2	
Chromium	7.9	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7440-47-3	
Cobalt	<0.43	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7440-48-4	
Copper	2.8	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7440-50-8	
Iron	4850	mg/kg	8.6	1	09/13/16 22:15	09/14/16 11:34	7439-89-6	
Lead	4.9	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7439-92-1	
Magnesium	140	mg/kg	8.6	1	09/13/16 22:15	09/14/16 11:34	7439-95-4	
Manganese	42.3	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7439-96-5	
Nickel	1.0	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7440-02-0	
Potassium	<428	mg/kg	428	1	09/13/16 22:15	09/14/16 11:34	7440-09-7	
Selenium	<0.86	mg/kg	0.86	1	09/13/16 22:15	09/14/16 11:34	7782-49-2	
Silver	<0.43	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7440-22-4	
Sodium	<428	mg/kg	428	1	09/13/16 22:15	09/14/16 11:34	7440-23-5	
Thallium	<0.86	mg/kg	0.86	1	09/13/16 22:15	09/14/16 11:34	7440-28-0	
Vanadium	12.4	mg/kg	0.43	1	09/13/16 22:15	09/14/16 11:34	7440-62-2	
Zinc	17.4	mg/kg	0.86	1	09/13/16 22:15	09/14/16 11:34	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.0069	mg/kg	0.0027	1	09/13/16 23:40	09/14/16 11:08	7439-97-6	
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	83-32-9	
Acenaphthylene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	208-96-8	
Acetophenone	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	98-86-2	
Anthracene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	120-12-7	
Atrazine	<813	ug/kg	813	1	09/14/16 14:30	09/21/16 20:09	1912-24-9	
Benzaldehyde	<813	ug/kg	813	1	09/14/16 14:30	09/21/16 20:09	100-52-7	L2
Benzo(a)anthracene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	56-55-3	
Benzo(a)pyrene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	50-32-8	
Benzo(b)fluoranthene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	205-99-2	
Benzo(g,h,i)perylene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	191-24-2	
Benzo(k)fluoranthene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	207-08-9	
Biphenyl (Diphenyl)	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	92-52-4	
4-Bromophenylphenyl ether	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	101-55-3	
Butylbenzylphthalate	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	85-68-7	
Caprolactam	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	105-60-2	
Carbazole	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	86-74-8	
4-Chloro-3-methylphenol	<813	ug/kg	813	1	09/14/16 14:30	09/21/16 20:09	59-50-7	
4-Chloroaniline	<2030	ug/kg	2030	1	09/14/16 14:30	09/21/16 20:09	106-47-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: D-1 **Lab ID: 92311939009** Collected: 09/09/16 14:45 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
bis(2-Chloroethoxy)methane	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	111-91-1	
bis(2-Chloroethyl) ether	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	111-44-4	
2-Chloronaphthalene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	91-58-7	
2-Chlorophenol	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	95-57-8	
4-Chlorophenylphenyl ether	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	7005-72-3	
Chrysene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	218-01-9	
Dibenz(a,h)anthracene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	53-70-3	
Dibenzofuran	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	132-64-9	
3,3'-Dichlorobenzidine	<2030	ug/kg	2030	1	09/14/16 14:30	09/21/16 20:09	91-94-1	
2,4-Dichlorophenol	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	120-83-2	
Diethylphthalate	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	84-66-2	
2,4-Dimethylphenol	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	105-67-9	
Dimethylphthalate	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	131-11-3	
Di-n-butylphthalate	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	84-74-2	
4,6-Dinitro-2-methylphenol	<813	ug/kg	813	1	09/14/16 14:30	09/21/16 20:09	534-52-1	
2,4-Dinitrophenol	<2030	ug/kg	2030	1	09/14/16 14:30	09/21/16 20:09	51-28-5	
2,4-Dinitrotoluene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	121-14-2	
2,6-Dinitrotoluene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	606-20-2	
Di-n-octylphthalate	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	117-84-0	
bis(2-Ethylhexyl)phthalate	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	117-81-7	
Fluoranthene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	206-44-0	
Fluorene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	86-73-7	
Hexachloro-1,3-butadiene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	87-68-3	
Hexachlorobenzene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	118-74-1	
Hexachlorocyclopentadiene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	77-47-4	
Hexachloroethane	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	67-72-1	
Indeno(1,2,3-cd)pyrene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	193-39-5	
Isophorone	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	78-59-1	
2-Methylnaphthalene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	91-57-6	
2-Methylphenol(o-Cresol)	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	95-48-7	
3&4-Methylphenol(m&p Cresol)	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09		
Naphthalene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	91-20-3	
2-Nitroaniline	<2030	ug/kg	2030	1	09/14/16 14:30	09/21/16 20:09	88-74-4	
3-Nitroaniline	<2030	ug/kg	2030	1	09/14/16 14:30	09/21/16 20:09	99-09-2	
4-Nitroaniline	<813	ug/kg	813	1	09/14/16 14:30	09/21/16 20:09	100-01-6	
Nitrobenzene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	98-95-3	
2-Nitrophenol	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	88-75-5	
4-Nitrophenol	<2030	ug/kg	2030	1	09/14/16 14:30	09/21/16 20:09	100-02-7	
N-Nitroso-di-n-propylamine	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	621-64-7	
N-Nitrosodiphenylamine	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	86-30-6	
2,2'-Oxybis(1-chloropropane)	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	108-60-1	
Pentachlorophenol	<2030	ug/kg	2030	1	09/14/16 14:30	09/21/16 20:09	87-86-5	
Phenanthrene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	85-01-8	
Phenol	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09		
Pyrene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	129-00-0	
1,2,4,5-Tetrachlorobenzene	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	95-94-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: D-1 **Lab ID: 92311939009** Collected: 09/09/16 14:45 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
2,3,4,6-Tetrachlorophenol	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	58-90-2	
2,4,5-Trichlorophenol	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	95-95-4	
2,4,6-Trichlorophenol	<407	ug/kg	407	1	09/14/16 14:30	09/21/16 20:09	88-06-2	
Surrogates								
2-Fluorobiphenyl (S)	40	%	30-110	1	09/14/16 14:30	09/21/16 20:09	321-60-8	
Terphenyl-d14 (S)	42	%	28-110	1	09/14/16 14:30	09/21/16 20:09	1718-51-0	
Phenol-d6 (S)	38	%	22-110	1	09/14/16 14:30	09/21/16 20:09	13127-88-3	
2-Fluorophenol (S)	36	%	13-110	1	09/14/16 14:30	09/21/16 20:09	367-12-4	
2,4,6-Tribromophenol (S)	39	%	27-110	1	09/14/16 14:30	09/21/16 20:09	118-79-6	
Nitrobenzene-d5 (S)	39	%	23-110	1	09/14/16 14:30	09/21/16 20:09	4165-60-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	18.9	%	0.10	1		09/14/16 09:22		

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-2-1 **Lab ID: 92311939010** Collected: 09/07/16 12:08 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	8230	mg/kg	36.8	5	09/13/16 22:15	09/14/16 17:25	7429-90-5	
Antimony	0.69	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7440-36-0	
Arsenic	1.9	mg/kg	0.74	1	09/13/16 22:15	09/14/16 11:37	7440-38-2	
Barium	33.7	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7440-39-3	
Beryllium	0.15	mg/kg	0.074	1	09/13/16 22:15	09/14/16 11:37	7440-41-7	
Cadmium	0.10	mg/kg	0.074	1	09/13/16 22:15	09/14/16 11:37	7440-43-9	
Calcium	3060	mg/kg	7.4	1	09/13/16 22:15	09/14/16 11:37	7440-70-2	
Chromium	18.2	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7440-47-3	
Cobalt	0.49	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7440-48-4	
Copper	5.3	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7440-50-8	
Iron	18500	mg/kg	36.8	5	09/13/16 22:15	09/14/16 17:25	7439-89-6	
Lead	9.1	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7439-92-1	
Magnesium	298	mg/kg	7.4	1	09/13/16 22:15	09/14/16 11:37	7439-95-4	
Manganese	81.1	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7439-96-5	
Nickel	2.1	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7440-02-0	
Potassium	500	mg/kg	368	1	09/13/16 22:15	09/14/16 11:37	7440-09-7	
Selenium	1.6	mg/kg	0.74	1	09/13/16 22:15	09/14/16 11:37	7782-49-2	
Silver	<0.37	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7440-22-4	
Sodium	<368	mg/kg	368	1	09/13/16 22:15	09/14/16 11:37	7440-23-5	
Thallium	<0.74	mg/kg	0.74	1	09/13/16 22:15	09/14/16 11:37	7440-28-0	
Vanadium	38.7	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:37	7440-62-2	
Zinc	248	mg/kg	0.74	1	09/13/16 22:15	09/14/16 11:37	7440-66-6	

7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.038	mg/kg	0.0029	1	09/13/16 23:40	09/14/16 11:11	7439-97-6	
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Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	15.1	%	0.10	1		09/14/16 09:22		
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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-2-6 **Lab ID: 92311939011** Collected: 09/07/16 13:44 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	5910	mg/kg	8.4	1	09/13/16 22:15	09/14/16 11:40	7429-90-5	
Antimony	<0.42	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7440-36-0	
Arsenic	1.5	mg/kg	0.84	1	09/13/16 22:15	09/14/16 11:40	7440-38-2	
Barium	17.9	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7440-39-3	
Beryllium	0.089	mg/kg	0.084	1	09/13/16 22:15	09/14/16 11:40	7440-41-7	
Cadmium	<0.084	mg/kg	0.084	1	09/13/16 22:15	09/14/16 11:40	7440-43-9	
Calcium	685	mg/kg	8.4	1	09/13/16 22:15	09/14/16 11:40	7440-70-2	
Chromium	10.4	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7440-47-3	
Cobalt	<0.42	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7440-48-4	
Copper	1.2	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7440-50-8	
Iron	9170	mg/kg	41.8	5	09/13/16 22:15	09/14/16 17:28	7439-89-6	
Lead	4.6	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7439-92-1	
Magnesium	189	mg/kg	8.4	1	09/13/16 22:15	09/14/16 11:40	7439-95-4	
Manganese	18.6	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7439-96-5	
Nickel	0.86	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7440-02-0	
Potassium	<418	mg/kg	418	1	09/13/16 22:15	09/14/16 11:40	7440-09-7	
Selenium	<0.84	mg/kg	0.84	1	09/13/16 22:15	09/14/16 11:40	7782-49-2	
Silver	<0.42	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7440-22-4	
Sodium	<418	mg/kg	418	1	09/13/16 22:15	09/14/16 11:40	7440-23-5	
Thallium	<0.84	mg/kg	0.84	1	09/13/16 22:15	09/14/16 11:40	7440-28-0	
Vanadium	20.6	mg/kg	0.42	1	09/13/16 22:15	09/14/16 11:40	7440-62-2	
Zinc	1.9	mg/kg	0.84	1	09/13/16 22:15	09/14/16 11:40	7440-66-6	

7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.011	mg/kg	0.0030	1	09/13/16 23:40	09/14/16 11:13	7439-97-6	
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Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	12.1	%	0.10	1		09/14/16 09:22		
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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-4-6 **Lab ID: 92311939012** Collected: 09/07/16 13:50 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	13500	mg/kg	71.9	10	09/13/16 22:15	09/14/16 17:31	7429-90-5	
Antimony	<0.36	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7440-36-0	
Arsenic	4.0	mg/kg	0.72	1	09/13/16 22:15	09/14/16 11:43	7440-38-2	
Barium	10.6	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7440-39-3	
Beryllium	0.20	mg/kg	0.072	1	09/13/16 22:15	09/14/16 11:43	7440-41-7	
Cadmium	<0.072	mg/kg	0.072	1	09/13/16 22:15	09/14/16 11:43	7440-43-9	
Calcium	942	mg/kg	7.2	1	09/13/16 22:15	09/14/16 11:43	7440-70-2	
Chromium	30.4	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7440-47-3	
Cobalt	<0.36	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7440-48-4	
Copper	1.6	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7440-50-8	
Iron	29900	mg/kg	71.9	10	09/13/16 22:15	09/14/16 17:31	7439-89-6	
Lead	7.8	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7439-92-1	
Magnesium	316	mg/kg	7.2	1	09/13/16 22:15	09/14/16 11:43	7439-95-4	
Manganese	5.2	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7439-96-5	
Nickel	1.1	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7440-02-0	
Potassium	766	mg/kg	360	1	09/13/16 22:15	09/14/16 11:43	7440-09-7	
Selenium	2.3	mg/kg	0.72	1	09/13/16 22:15	09/14/16 11:43	7782-49-2	
Silver	<0.36	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7440-22-4	
Sodium	<360	mg/kg	360	1	09/13/16 22:15	09/14/16 11:43	7440-23-5	
Thallium	<0.72	mg/kg	0.72	1	09/13/16 22:15	09/14/16 11:43	7440-28-0	
Vanadium	60.9	mg/kg	0.36	1	09/13/16 22:15	09/14/16 11:43	7440-62-2	
Zinc	1.3	mg/kg	0.72	1	09/13/16 22:15	09/14/16 11:43	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.020	mg/kg	0.0046	1	09/13/16 23:40	09/14/16 11:15	7439-97-6	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.0	%	0.10	1		09/14/16 09:23		

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ANALYTICAL RESULTS

Project: Marsh Pamplico
Pace Project No.: 92311939

Sample: GC-3-6 **Lab ID: 92311939013** Collected: 09/07/16 13:59 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	14500	mg/kg	45.9	5	09/13/16 22:15	09/14/16 17:35	7429-90-5	
Antimony	<0.46	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7440-36-0	
Arsenic	4.5	mg/kg	0.92	1	09/13/16 22:15	09/14/16 11:46	7440-38-2	
Barium	14.1	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7440-39-3	
Beryllium	0.24	mg/kg	0.092	1	09/13/16 22:15	09/14/16 11:46	7440-41-7	
Cadmium	<0.092	mg/kg	0.092	1	09/13/16 22:15	09/14/16 11:46	7440-43-9	
Calcium	466	mg/kg	9.2	1	09/13/16 22:15	09/14/16 11:46	7440-70-2	
Chromium	28.8	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7440-47-3	
Cobalt	<0.46	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7440-48-4	
Copper	1.6	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7440-50-8	
Iron	30400	mg/kg	45.9	5	09/13/16 22:15	09/14/16 17:35	7439-89-6	
Lead	8.4	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7439-92-1	
Magnesium	603	mg/kg	9.2	1	09/13/16 22:15	09/14/16 11:46	7439-95-4	
Manganese	2.7	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7439-96-5	
Nickel	1.3	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7440-02-0	
Potassium	862	mg/kg	459	1	09/13/16 22:15	09/14/16 11:46	7440-09-7	
Selenium	2.7	mg/kg	0.92	1	09/13/16 22:15	09/14/16 11:46	7782-49-2	
Silver	<0.46	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7440-22-4	
Sodium	<459	mg/kg	459	1	09/13/16 22:15	09/14/16 11:46	7440-23-5	
Thallium	<0.92	mg/kg	0.92	1	09/13/16 22:15	09/14/16 11:46	7440-28-0	
Vanadium	60.8	mg/kg	0.46	1	09/13/16 22:15	09/14/16 11:46	7440-62-2	
Zinc	1.2	mg/kg	0.92	1	09/13/16 22:15	09/14/16 11:46	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.027	mg/kg	0.0028	1	09/13/16 23:40	09/14/16 11:18	7439-97-6	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	21.0	%	0.10	1		09/14/16 09:23		

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-1-1 **Lab ID: 92311939014** Collected: 09/09/16 14:04 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	2980	mg/kg	7.4	1	09/13/16 22:15	09/14/16 11:49	7429-90-5	
Antimony	0.70	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7440-36-0	
Arsenic	1.6	mg/kg	0.74	1	09/13/16 22:15	09/14/16 11:49	7440-38-2	
Barium	74.7	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7440-39-3	
Beryllium	0.077	mg/kg	0.074	1	09/13/16 22:15	09/14/16 11:49	7440-41-7	
Cadmium	<0.074	mg/kg	0.074	1	09/13/16 22:15	09/14/16 11:49	7440-43-9	
Calcium	6030	mg/kg	7.4	1	09/13/16 22:15	09/14/16 11:49	7440-70-2	
Chromium	4.1	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7440-47-3	
Cobalt	0.64	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7440-48-4	
Copper	7.1	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7440-50-8	
Iron	3930	mg/kg	7.4	1	09/13/16 22:15	09/14/16 11:49	7439-89-6	
Lead	16.7	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7439-92-1	
Magnesium	433	mg/kg	7.4	1	09/13/16 22:15	09/14/16 11:49	7439-95-4	
Manganese	128	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7439-96-5	
Nickel	1.6	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7440-02-0	
Potassium	393	mg/kg	370	1	09/13/16 22:15	09/14/16 11:49	7440-09-7	
Selenium	<0.74	mg/kg	0.74	1	09/13/16 22:15	09/14/16 11:49	7782-49-2	
Silver	<0.37	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7440-22-4	
Sodium	<370	mg/kg	370	1	09/13/16 22:15	09/14/16 11:49	7440-23-5	
Thallium	<0.74	mg/kg	0.74	1	09/13/16 22:15	09/14/16 11:49	7440-28-0	
Vanadium	9.4	mg/kg	0.37	1	09/13/16 22:15	09/14/16 11:49	7440-62-2	
Zinc	19.9	mg/kg	0.74	1	09/13/16 22:15	09/14/16 11:49	7440-66-6	

7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.038	mg/kg	0.0021	1	09/13/16 23:40	09/14/16 11:20	7439-97-6	
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Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	15.5	%	0.10	1		09/14/16 09:23		
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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-1-6 **Lab ID: 92311939015** Collected: 09/09/16 14:08 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	6950	mg/kg	8.7	1	09/13/16 22:15	09/14/16 12:02	7429-90-5	
Antimony	<0.43	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7440-36-0	
Arsenic	<0.87	mg/kg	0.87	1	09/13/16 22:15	09/14/16 12:02	7440-38-2	
Barium	10.9	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7440-39-3	
Beryllium	<0.087	mg/kg	0.087	1	09/13/16 22:15	09/14/16 12:02	7440-41-7	
Cadmium	<0.087	mg/kg	0.087	1	09/13/16 22:15	09/14/16 12:02	7440-43-9	
Calcium	1270	mg/kg	8.7	1	09/13/16 22:15	09/14/16 12:02	7440-70-2	
Chromium	6.0	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7440-47-3	
Cobalt	<0.43	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7440-48-4	
Copper	0.63	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7440-50-8	
Iron	5370	mg/kg	8.7	1	09/13/16 22:15	09/14/16 12:02	7439-89-6	
Lead	6.4	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7439-92-1	
Magnesium	190	mg/kg	8.7	1	09/13/16 22:15	09/14/16 12:02	7439-95-4	
Manganese	6.7	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7439-96-5	
Nickel	0.66	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7440-02-0	
Potassium	<433	mg/kg	433	1	09/13/16 22:15	09/14/16 12:02	7440-09-7	
Selenium	<0.87	mg/kg	0.87	1	09/13/16 22:15	09/14/16 12:02	7782-49-2	
Silver	<0.43	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7440-22-4	
Sodium	<433	mg/kg	433	1	09/13/16 22:15	09/14/16 12:02	7440-23-5	
Thallium	<0.87	mg/kg	0.87	1	09/13/16 22:15	09/14/16 12:02	7440-28-0	
Vanadium	12.2	mg/kg	0.43	1	09/13/16 22:15	09/14/16 12:02	7440-62-2	
Zinc	<0.87	mg/kg	0.87	1	09/13/16 22:15	09/14/16 12:02	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.018	mg/kg	0.0056	1	09/13/16 23:40	09/14/16 11:23	7439-97-6	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	18.7	%	0.10	1		09/14/16 09:28		

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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-4-1 **Lab ID: 92311939016** Collected: 09/09/16 14:40 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	3420	mg/kg	6.4	1	09/13/16 22:15	09/14/16 12:05	7429-90-5	
Antimony	0.60	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7440-36-0	
Arsenic	2.7	mg/kg	0.64	1	09/13/16 22:15	09/14/16 12:05	7440-38-2	
Barium	53.9	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7440-39-3	
Beryllium	0.12	mg/kg	0.064	1	09/13/16 22:15	09/14/16 12:05	7440-41-7	
Cadmium	<0.064	mg/kg	0.064	1	09/13/16 22:15	09/14/16 12:05	7440-43-9	
Calcium	56700	mg/kg	64.2	10	09/13/16 22:15	09/15/16 12:49	7440-70-2	
Chromium	15.0	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7440-47-3	
Cobalt	0.63	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7440-48-4	
Copper	12.0	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7440-50-8	
Iron	8900	mg/kg	64.2	10	09/13/16 22:15	09/15/16 12:49	7439-89-6	
Lead	12.2	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7439-92-1	
Magnesium	1370	mg/kg	6.4	1	09/13/16 22:15	09/14/16 12:05	7439-95-4	
Manganese	159	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7439-96-5	
Nickel	5.2	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7440-02-0	
Potassium	438	mg/kg	321	1	09/13/16 22:15	09/14/16 12:05	7440-09-7	
Selenium	<0.64	mg/kg	0.64	1	09/13/16 22:15	09/14/16 12:05	7782-49-2	
Silver	<0.32	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7440-22-4	
Sodium	<321	mg/kg	321	1	09/13/16 22:15	09/14/16 12:05	7440-23-5	
Thallium	<0.64	mg/kg	0.64	1	09/13/16 22:15	09/14/16 12:05	7440-28-0	
Vanadium	12.6	mg/kg	0.32	1	09/13/16 22:15	09/14/16 12:05	7440-62-2	
Zinc	107	mg/kg	0.64	1	09/13/16 22:15	09/14/16 12:05	7440-66-6	

7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.053	mg/kg	0.0026	1	09/13/16 23:40	09/14/16 11:25	7439-97-6	
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Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	9.4	%	0.10	1		09/14/16 09:28		
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ANALYTICAL RESULTS

Project: Marsh Pamplico

Pace Project No.: 92311939

Sample: GC-3-1 **Lab ID: 92311939017** Collected: 09/09/16 14:17 Received: 09/12/16 10:54 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050						
Aluminum	3500	mg/kg	7.0	1	09/13/16 22:15	09/14/16 12:08	7429-90-5	
Antimony	<0.35	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7440-36-0	
Arsenic	1.1	mg/kg	0.70	1	09/13/16 22:15	09/14/16 12:08	7440-38-2	
Barium	45.0	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7440-39-3	
Beryllium	0.15	mg/kg	0.070	1	09/13/16 22:15	09/14/16 12:08	7440-41-7	
Cadmium	<0.070	mg/kg	0.070	1	09/13/16 22:15	09/14/16 12:08	7440-43-9	
Calcium	4260	mg/kg	7.0	1	09/13/16 22:15	09/14/16 12:08	7440-70-2	
Chromium	5.4	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7440-47-3	
Cobalt	0.42	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7440-48-4	
Copper	4.4	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7440-50-8	
Iron	4830	mg/kg	7.0	1	09/13/16 22:15	09/14/16 12:08	7439-89-6	
Lead	40.8	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7439-92-1	
Magnesium	389	mg/kg	7.0	1	09/13/16 22:15	09/14/16 12:08	7439-95-4	
Manganese	85.9	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7439-96-5	
Nickel	1.1	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7440-02-0	
Potassium	585	mg/kg	352	1	09/13/16 22:15	09/14/16 12:08	7440-09-7	
Selenium	<0.70	mg/kg	0.70	1	09/13/16 22:15	09/14/16 12:08	7782-49-2	
Silver	<0.35	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7440-22-4	
Sodium	<352	mg/kg	352	1	09/13/16 22:15	09/14/16 12:08	7440-23-5	
Thallium	<0.70	mg/kg	0.70	1	09/13/16 22:15	09/14/16 12:08	7440-28-0	
Vanadium	11.7	mg/kg	0.35	1	09/13/16 22:15	09/14/16 12:08	7440-62-2	
Zinc	10.1	mg/kg	0.70	1	09/13/16 22:15	09/14/16 12:08	7440-66-6	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471						
Mercury	0.0082	mg/kg	0.0039	1	09/13/16 23:40	09/14/16 11:27	7439-97-6	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	26.8	%	0.10	1		09/14/16 09:28		

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QUALITY CONTROL DATA

Project: Marsh Pamplico

Pace Project No.: 92311939

QC Batch: 328346 Analysis Method: EPA 6010
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET
 Associated Lab Samples: 92311939009, 92311939010, 92311939011, 92311939012, 92311939013, 92311939014, 92311939015, 92311939016, 92311939017

METHOD BLANK: 1819772 Matrix: Solid
 Associated Lab Samples: 92311939009, 92311939010, 92311939011, 92311939012, 92311939013, 92311939014, 92311939015, 92311939016, 92311939017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	mg/kg	<10.0	10.0	09/14/16 11:06	
Antimony	mg/kg	<0.50	0.50	09/14/16 11:06	
Arsenic	mg/kg	<1.0	1.0	09/14/16 11:06	
Barium	mg/kg	<0.50	0.50	09/14/16 11:06	
Beryllium	mg/kg	<0.10	0.10	09/14/16 11:06	
Cadmium	mg/kg	<0.10	0.10	09/14/16 11:06	
Calcium	mg/kg	<10.0	10.0	09/14/16 14:32	
Chromium	mg/kg	<0.50	0.50	09/14/16 11:06	
Cobalt	mg/kg	<0.50	0.50	09/14/16 11:06	
Copper	mg/kg	<0.50	0.50	09/14/16 11:06	
Iron	mg/kg	<10.0	10.0	09/14/16 11:06	
Lead	mg/kg	<0.50	0.50	09/14/16 11:06	
Magnesium	mg/kg	<10.0	10.0	09/14/16 11:06	
Manganese	mg/kg	<0.50	0.50	09/14/16 11:06	
Nickel	mg/kg	<0.50	0.50	09/14/16 11:06	
Potassium	mg/kg	<500	500	09/14/16 11:06	
Selenium	mg/kg	<1.0	1.0	09/14/16 11:06	
Silver	mg/kg	<0.50	0.50	09/14/16 11:06	
Sodium	mg/kg	<500	500	09/14/16 11:06	
Thallium	mg/kg	<1.0	1.0	09/14/16 11:06	
Vanadium	mg/kg	<0.50	0.50	09/14/16 11:06	
Zinc	mg/kg	<1.0	1.0	09/14/16 11:06	

LABORATORY CONTROL SAMPLE: 1819773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/kg	500	484	97	80-120	
Antimony	mg/kg	50	48.0	96	80-120	
Arsenic	mg/kg	50	47.2	94	80-120	
Barium	mg/kg	50	49.2	98	80-120	
Beryllium	mg/kg	50	48.8	98	80-120	
Cadmium	mg/kg	50	48.8	98	80-120	
Calcium	mg/kg	500	508	102	80-120	
Chromium	mg/kg	50	48.2	96	80-120	
Cobalt	mg/kg	50	48.8	98	80-120	
Copper	mg/kg	50	49.9	100	80-120	
Iron	mg/kg	500	480	96	80-120	
Lead	mg/kg	50	48.1	96	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Marsh Pamplico
Pace Project No.: 92311939

LABORATORY CONTROL SAMPLE: 1819773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	mg/kg	500	475	95	80-120	
Manganese	mg/kg	50	48.9	98	80-120	
Nickel	mg/kg	50	47.8	96	80-120	
Potassium	mg/kg	500	<500	96	80-120	
Selenium	mg/kg	50	49.5	99	80-120	
Silver	mg/kg	25	24.4	97	80-120	
Sodium	mg/kg	500	<500	96	80-120	
Thallium	mg/kg	50	48.3	97	80-120	
Vanadium	mg/kg	50	47.9	96	80-120	
Zinc	mg/kg	50	49.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1819775 1819776

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		92311651001 Result	Spike Conc.	Spike Conc.	MS Result					
Aluminum	mg/kg	315	369	334	566	501	68	56	75-125	12 M1
Antimony	mg/kg	ND	36.9	33.4	35.5	32.4	96	97	75-125	9
Arsenic	mg/kg	ND	36.9	33.4	35.2	32.4	95	96	75-125	8
Barium	mg/kg	0.94	36.9	33.4	37.0	33.7	98	98	75-125	9
Beryllium	mg/kg	ND	36.9	33.4	36.2	32.9	98	98	75-125	9
Cadmium	mg/kg	ND	36.9	33.4	36.0	33.1	98	99	75-125	9
Calcium	mg/kg	258	369	334	530	517	74	78	75-125	2 M1
Chromium	mg/kg	ND	36.9	33.4	35.8	32.6	96	96	75-125	10
Cobalt	mg/kg	ND	36.9	33.4	36.2	33.2	98	99	75-125	9
Copper	mg/kg	0.45	36.9	33.4	37.0	33.7	99	100	75-125	9
Iron	mg/kg	556	369	334	648	503	25	-16	75-125	25 M1, R1
Lead	mg/kg	1.5	36.9	33.4	36.8	33.6	96	96	75-125	9
Magnesium	mg/kg	158	369	334	438	377	76	66	75-125	15 M1
Manganese	mg/kg	26.2	36.9	33.4	50.8	42.4	67	49	75-125	18 M1
Nickel	mg/kg	ND	36.9	33.4	35.4	32.5	95	96	75-125	9
Potassium	mg/kg	ND	369	334	428	406	87	90	75-125	5
Selenium	mg/kg	ND	36.9	33.4	36.7	33.4	100	100	75-125	10
Silver	mg/kg	ND	18.4	16.7	17.9	16.4	97	98	75-125	9
Sodium	mg/kg	ND	369	334	382	352	97	98	75-125	8
Thallium	mg/kg	ND	36.9	33.4	35.8	32.9	97	98	75-125	9
Vanadium	mg/kg	0.51	36.9	33.4	35.6	32.6	95	96	75-125	9
Zinc	mg/kg	4.7	36.9	33.4	38.2	35.1	91	91	75-125	8

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Marsh Pamplico

Pace Project No.: 92311939

QC Batch: 328501 Analysis Method: EPA 8270
 QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
 Associated Lab Samples: 92311939001, 92311939002, 92311939003, 92311939004, 92311939005, 92311939006, 92311939007, 92311939008, 92311939009

METHOD BLANK: 1820773 Matrix: Solid
 Associated Lab Samples: 92311939001, 92311939002, 92311939003, 92311939004, 92311939005, 92311939006, 92311939007, 92311939008, 92311939009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/kg	<330	330	09/15/16 12:41	
2,2'-Oxybis(1-chloropropane)	ug/kg	<330	330	09/15/16 12:41	
2,3,4,6-Tetrachlorophenol	ug/kg	<330	330	09/15/16 12:41	
2,4,5-Trichlorophenol	ug/kg	<330	330	09/15/16 12:41	
2,4,6-Trichlorophenol	ug/kg	<330	330	09/15/16 12:41	
2,4-Dichlorophenol	ug/kg	<330	330	09/15/16 12:41	
2,4-Dimethylphenol	ug/kg	<330	330	09/15/16 12:41	
2,4-Dinitrophenol	ug/kg	<1650	1650	09/15/16 12:41	
2,4-Dinitrotoluene	ug/kg	<330	330	09/15/16 12:41	
2,6-Dinitrotoluene	ug/kg	<330	330	09/15/16 12:41	
2-Chloronaphthalene	ug/kg	<330	330	09/15/16 12:41	
2-Chlorophenol	ug/kg	<330	330	09/15/16 12:41	
2-Methylnaphthalene	ug/kg	<330	330	09/15/16 12:41	
2-Methylphenol(o-Cresol)	ug/kg	<330	330	09/15/16 12:41	
2-Nitroaniline	ug/kg	<1650	1650	09/15/16 12:41	
2-Nitrophenol	ug/kg	<330	330	09/15/16 12:41	
3&4-Methylphenol(m&p Cresol)	ug/kg	<330	330	09/15/16 12:41	
3,3'-Dichlorobenzidine	ug/kg	<1650	1650	09/15/16 12:41	
3-Nitroaniline	ug/kg	<1650	1650	09/15/16 12:41	
4,6-Dinitro-2-methylphenol	ug/kg	<660	660	09/15/16 12:41	
4-Bromophenylphenyl ether	ug/kg	<330	330	09/15/16 12:41	
4-Chloro-3-methylphenol	ug/kg	<660	660	09/15/16 12:41	
4-Chloroaniline	ug/kg	<1650	1650	09/15/16 12:41	
4-Chlorophenylphenyl ether	ug/kg	<330	330	09/15/16 12:41	
4-Nitroaniline	ug/kg	<660	660	09/15/16 12:41	
4-Nitrophenol	ug/kg	<1650	1650	09/15/16 12:41	
Acenaphthene	ug/kg	<330	330	09/15/16 12:41	
Acenaphthylene	ug/kg	<330	330	09/15/16 12:41	
Acetophenone	ug/kg	<330	330	09/15/16 12:41	
Anthracene	ug/kg	<330	330	09/15/16 12:41	
Atrazine	ug/kg	<660	660	09/15/16 12:41	
Benzaldehyde	ug/kg	<660	660	09/15/16 12:41	
Benzo(a)anthracene	ug/kg	<330	330	09/15/16 12:41	
Benzo(a)pyrene	ug/kg	<330	330	09/15/16 12:41	
Benzo(b)fluoranthene	ug/kg	<330	330	09/15/16 12:41	
Benzo(g,h,i)perylene	ug/kg	<330	330	09/15/16 12:41	
Benzo(k)fluoranthene	ug/kg	<330	330	09/15/16 12:41	
Biphenyl (Diphenyl)	ug/kg	<330	330	09/15/16 12:41	
bis(2-Chloroethoxy)methane	ug/kg	<330	330	09/15/16 12:41	
bis(2-Chloroethyl) ether	ug/kg	<330	330	09/15/16 12:41	

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QUALITY CONTROL DATA

Project: Marsh Pamplico

Pace Project No.: 92311939

METHOD BLANK: 1820773

Matrix: Solid

Associated Lab Samples: 92311939001, 92311939002, 92311939003, 92311939004, 92311939005, 92311939006, 92311939007, 92311939008, 92311939009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
bis(2-Ethylhexyl)phthalate	ug/kg	<330	330	09/15/16 12:41	
Butylbenzylphthalate	ug/kg	<330	330	09/15/16 12:41	
Caprolactam	ug/kg	<330	330	09/15/16 12:41	
Carbazole	ug/kg	<330	330	09/15/16 12:41	
Chrysene	ug/kg	<330	330	09/15/16 12:41	
Di-n-butylphthalate	ug/kg	<330	330	09/15/16 12:41	
Di-n-octylphthalate	ug/kg	<330	330	09/15/16 12:41	
Dibenz(a,h)anthracene	ug/kg	<330	330	09/15/16 12:41	
Dibenzofuran	ug/kg	<330	330	09/15/16 12:41	
Diethylphthalate	ug/kg	<330	330	09/15/16 12:41	
Dimethylphthalate	ug/kg	<330	330	09/15/16 12:41	
Fluoranthene	ug/kg	<330	330	09/15/16 12:41	
Fluorene	ug/kg	<330	330	09/15/16 12:41	
Hexachloro-1,3-butadiene	ug/kg	<330	330	09/15/16 12:41	
Hexachlorobenzene	ug/kg	<330	330	09/15/16 12:41	
Hexachlorocyclopentadiene	ug/kg	<330	330	09/15/16 12:41	
Hexachloroethane	ug/kg	<330	330	09/15/16 12:41	
Indeno(1,2,3-cd)pyrene	ug/kg	<330	330	09/15/16 12:41	
Isophorone	ug/kg	<330	330	09/15/16 12:41	
N-Nitroso-di-n-propylamine	ug/kg	<330	330	09/15/16 12:41	
N-Nitrosodiphenylamine	ug/kg	<330	330	09/15/16 12:41	
Naphthalene	ug/kg	<330	330	09/15/16 12:41	
Nitrobenzene	ug/kg	<330	330	09/15/16 12:41	
Pentachlorophenol	ug/kg	<1650	1650	09/15/16 12:41	
Phenanthrene	ug/kg	<330	330	09/15/16 12:41	
Phenol	ug/kg	<330	330	09/15/16 12:41	
Pyrene	ug/kg	<330	330	09/15/16 12:41	
2,4,6-Tribromophenol (S)	%	86	27-110	09/15/16 12:41	
2-Fluorobiphenyl (S)	%	78	30-110	09/15/16 12:41	
2-Fluorophenol (S)	%	78	13-110	09/15/16 12:41	
Nitrobenzene-d5 (S)	%	78	23-110	09/15/16 12:41	
Phenol-d6 (S)	%	85	22-110	09/15/16 12:41	
Terphenyl-d14 (S)	%	91	28-110	09/15/16 12:41	

LABORATORY CONTROL SAMPLE: 1820774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/kg	1670	1060	63	36-124	
2,2'-Oxybis(1-chloropropane)	ug/kg	1670	1080	65	17-120	
2,3,4,6-Tetrachlorophenol	ug/kg	1670	1850	111	82-262	
2,4,5-Trichlorophenol	ug/kg	1670	1420	85	37-120	
2,4,6-Trichlorophenol	ug/kg	1670	1450	87	40-120	
2,4-Dichlorophenol	ug/kg	1670	1320	79	33-120	

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QUALITY CONTROL DATA

Project: Marsh Pamplico

Pace Project No.: 92311939

LABORATORY CONTROL SAMPLE: 1820774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dimethylphenol	ug/kg	1670	1520	91	36-120	
2,4-Dinitrophenol	ug/kg	8330	5720	69	22-121	
2,4-Dinitrotoluene	ug/kg	1670	1610	97	60-120	
2,6-Dinitrotoluene	ug/kg	1670	1610	96	54-120	
2-Chloronaphthalene	ug/kg	1670	1360	82	41-120	
2-Chlorophenol	ug/kg	1670	1220	73	39-120	
2-Methylnaphthalene	ug/kg	1670	1160	69	26-120	
2-Methylphenol(o-Cresol)	ug/kg	1670	1430	86	41-120	
2-Nitroaniline	ug/kg	3330	2450	74	45-120	
2-Nitrophenol	ug/kg	1670	1280	77	35-120	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1410	84	35-120	
3,3'-Dichlorobenzidine	ug/kg	8330	2870	34	16-125	
3-Nitroaniline	ug/kg	3330	2700	81	45-120	
4,6-Dinitro-2-methylphenol	ug/kg	3330	2960	89	46-120	
4-Bromophenylphenyl ether	ug/kg	1670	1300	78	36-120	
4-Chloro-3-methylphenol	ug/kg	3330	2770	83	37-120	
4-Chloroaniline	ug/kg	3330	2280	68	35-120	
4-Chlorophenylphenyl ether	ug/kg	1670	1320	79	30-120	
4-Nitroaniline	ug/kg	3330	2890	87	48-120	
4-Nitrophenol	ug/kg	8330	7670	92	43-120	
Acenaphthene	ug/kg	1670	1240	74	46-120	
Acenaphthylene	ug/kg	1670	1280	77	46-120	
Acetophenone	ug/kg	1670	1200	72	39-120	
Anthracene	ug/kg	1670	1340	80	63-120	
Atrazine	ug/kg	1670	1460	88	70-156	
Benzaldehyde	ug/kg	1670	<660	8	10-120	LO
Benzo(a)anthracene	ug/kg	1670	1350	81	61-120	
Benzo(a)pyrene	ug/kg	1670	1340	80	59-120	
Benzo(b)fluoranthene	ug/kg	1670	1380	83	55-120	
Benzo(g,h,i)perylene	ug/kg	1670	1410	84	57-120	
Benzo(k)fluoranthene	ug/kg	1670	1300	78	56-120	
Biphenyl (Diphenyl)	ug/kg	1670	1090	65	40-120	
bis(2-Chloroethoxy)methane	ug/kg	1670	1190	71	21-120	
bis(2-Chloroethyl) ether	ug/kg	1670	1100	66	25-120	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1420	85	56-123	
Butylbenzylphthalate	ug/kg	1670	1490	90	57-120	
Caprolactam	ug/kg	1670	1370	82	23-163	
Carbazole	ug/kg	1670	1330	80	57-120	
Chrysene	ug/kg	1670	1300	78	64-120	
Di-n-butylphthalate	ug/kg	1670	1430	86	58-120	
Di-n-octylphthalate	ug/kg	1670	1440	87	47-121	
Dibenz(a,h)anthracene	ug/kg	1670	1420	85	56-120	
Dibenzofuran	ug/kg	1670	1190	71	43-120	
Diethylphthalate	ug/kg	1670	1340	80	55-120	
Dimethylphthalate	ug/kg	1670	1270	76	54-120	
Fluoranthene	ug/kg	1670	1510	90	61-120	
Fluorene	ug/kg	1670	1340	81	51-120	

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QUALITY CONTROL DATA

Project: Marsh Pamplico

Pace Project No.: 92311939

LABORATORY CONTROL SAMPLE: 1820774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	1670	1010	60	22-120	
Hexachlorobenzene	ug/kg	1670	1310	79	53-120	
Hexachlorocyclopentadiene	ug/kg	1670	1170	70	18-150	
Hexachloroethane	ug/kg	1670	1040	62	39-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1400	84	58-120	
Isophorone	ug/kg	1670	1300	78	38-120	
N-Nitroso-di-n-propylamine	ug/kg	1670	1210	73	30-120	
N-Nitrosodiphenylamine	ug/kg	1670	1170	70	50-120	
Naphthalene	ug/kg	1670	1080	65	38-120	
Nitrobenzene	ug/kg	1670	1140	68	37-120	
Pentachlorophenol	ug/kg	8330	3310	40	10-120	
Phenanthrene	ug/kg	1670	1320	79	62-120	
Phenol	ug/kg	1670	1370	82	37-120	
Pyrene	ug/kg	1670	1290	77	63-120	
2,4,6-Tribromophenol (S)	%			88	27-110	
2-Fluorobiphenyl (S)	%			68	30-110	
2-Fluorophenol (S)	%			67	13-110	
Nitrobenzene-d5 (S)	%			63	23-110	
Phenol-d6 (S)	%			77	22-110	
Terphenyl-d14 (S)	%			80	28-110	

MATRIX SPIKE SAMPLE: 1820775

Parameter	Units	92311939008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/kg	<401	2030	420	21	50-150	M1
2,2'-Oxybis(1-chloropropane)	ug/kg	<401	2030	474	23	50-150	M1
2,3,4,6-Tetrachlorophenol	ug/kg	<401	2030	1410	69	50-150	
2,4,5-Trichlorophenol	ug/kg	<401	2030	866	43	28-110	
2,4,6-Trichlorophenol	ug/kg	<401	2030	775	38	17-117	
2,4-Dichlorophenol	ug/kg	<401	2030	440	22	21-128	
2,4-Dimethylphenol	ug/kg	<401	2030	530	26	10-120	
2,4-Dinitrophenol	ug/kg	<2000	10100	<2000	20	10-107	
2,4-Dinitrotoluene	ug/kg	<401	2030	1030	51	36-109	
2,6-Dinitrotoluene	ug/kg	<401	2030	1070	53	32-110	
2-Chloronaphthalene	ug/kg	<401	2030	610	30	30-107	
2-Chlorophenol	ug/kg	<401	2030	444	22	14-106	
2-Methylnaphthalene	ug/kg	<401	2030	495	24	10-135	
2-Methylphenol(o-Cresol)	ug/kg	<401	2030	489	24	10-124	
2-Nitroaniline	ug/kg	<2000	4040	<2000	41	26-116	
2-Nitrophenol	ug/kg	<401	2030	<401	19	28-103	M1
3&4-Methylphenol(m&p Cresol)	ug/kg	<401	2030	425	21	10-109	
3,3'-Dichlorobenzidine	ug/kg	<2000	10100	<2000	19	10-150	
3-Nitroaniline	ug/kg	<2000	4040	<2000	43	22-110	
4,6-Dinitro-2-methylphenol	ug/kg	<802	4040	1500	37	13-121	
4-Bromophenylphenyl ether	ug/kg	<401	2030	924	46	31-109	

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QUALITY CONTROL DATA

Project: Marsh Pamplico

Pace Project No.: 92311939

MATRIX SPIKE SAMPLE: 1820775		92311939008	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
4-Chloro-3-methylphenol	ug/kg	<802	4040	1730	43	13-128	
4-Chloroaniline	ug/kg	<2000	4040	<2000	25	18-102	
4-Chlorophenylphenyl ether	ug/kg	<401	2030	899	44	29-112	
4-Nitroaniline	ug/kg	<802	4040	1940	48	16-111	
4-Nitrophenol	ug/kg	<2000	10100	4470	44	14-135	
Acenaphthene	ug/kg	<401	2030	722	36	26-114	
Acenaphthylene	ug/kg	<401	2030	734	36	32-108	
Acetophenone	ug/kg	<401	2030	459	23	50-150	M1
Anthracene	ug/kg	<401	2030	977	48	32-111	
Atrazine	ug/kg	<802	2030	946	47	50-150	M1
Benzaldehyde	ug/kg	<802	2030	<802	13	50-150	M0
Benzo(a)anthracene	ug/kg	<401	2030	971	48	25-117	
Benzo(a)pyrene	ug/kg	<401	2030	929	46	25-106	
Benzo(b)fluoranthene	ug/kg	<401	2030	959	47	24-110	
Benzo(g,h,i)perylene	ug/kg	<401	2030	933	46	19-112	
Benzo(k)fluoranthene	ug/kg	<401	2030	926	46	24-114	
Biphenyl (Diphenyl)	ug/kg	<401	2030	508	25	50-150	M1
bis(2-Chloroethoxy)methane	ug/kg	<401	2030	449	22	13-119	
bis(2-Chloroethyl) ether	ug/kg	<401	2030	492	24	10-134	
bis(2-Ethylhexyl)phthalate	ug/kg	<401	2030	1010	50	10-125	
Butylbenzylphthalate	ug/kg	<401	2030	1080	54	18-110	
Caprolactam	ug/kg	<401	2030	870	43	50-150	M1
Carbazole	ug/kg	<401	2030	927	46	50-150	M1
Chrysene	ug/kg	<401	2030	970	48	30-110	
Di-n-butylphthalate	ug/kg	<401	2030	980	48	19-112	
Di-n-octylphthalate	ug/kg	<401	2030	935	46	17-105	
Dibenz(a,h)anthracene	ug/kg	<401	2030	923	46	23-111	
Dibenzofuran	ug/kg	<401	2030	769	38	35-103	
Diethylphthalate	ug/kg	<401	2030	970	48	27-113	
Dimethylphthalate	ug/kg	<401	2030	907	45	26-111	
Fluoranthene	ug/kg	<401	2030	1020	51	33-109	
Fluorene	ug/kg	<401	2030	931	46	32-113	
Hexachloro-1,3-butadiene	ug/kg	<401	2030	405	20	16-116	
Hexachlorobenzene	ug/kg	<401	2030	956	47	27-120	
Hexachlorocyclopentadiene	ug/kg	<401	2030	<401	16	10-108	
Hexachloroethane	ug/kg	<401	2030	451	22	10-117	
Indeno(1,2,3-cd)pyrene	ug/kg	<401	2030	908	45	10-122	
Isophorone	ug/kg	<401	2030	531	26	28-114	M1
N-Nitroso-di-n-propylamine	ug/kg	<401	2030	460	23	27-113	M1
N-Nitrosodiphenylamine	ug/kg	<401	2030	884	44	10-128	
Naphthalene	ug/kg	<401	2030	461	23	25-110	M1
Nitrobenzene	ug/kg	<401	2030	464	23	18-114	
Pentachlorophenol	ug/kg	<2000	10100	2050	20	10-122	
Phenanthrene	ug/kg	<401	2030	970	48	30-114	
Phenol	ug/kg	<401	2030	472	23	11-102	
Pyrene	ug/kg	<401	2030	1010	50	25-116	
2,4,6-Tribromophenol (S)	%				48	27-110	

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QUALITY CONTROL DATA

Project: Marsh Pamplico

Pace Project No.: 92311939

MATRIX SPIKE SAMPLE: 1820775		92311939008	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
2-Fluorobiphenyl (S)	%				24	30-110	SO
2-Fluorophenol (S)	%				20	13-110	
Nitrobenzene-d5 (S)	%				20	23-110	SO
Phenol-d6 (S)	%				21	22-110	SO
Terphenyl-d14 (S)	%				49	28-110	

SAMPLE DUPLICATE: 1820776

Parameter	Units	92311939009	Dup	RPD	Qualifiers
		Result	Result		
1,2,4,5-Tetrachlorobenzene	ug/kg	<407	<407		
2,2'-Oxybis(1-chloropropane)	ug/kg	<407	<407		
2,3,4,6-Tetrachlorophenol	ug/kg	<407	<407		
2,4,5-Trichlorophenol	ug/kg	<407	<407		
2,4,6-Trichlorophenol	ug/kg	<407	<407		
2,4-Dichlorophenol	ug/kg	<407	<407		
2,4-Dimethylphenol	ug/kg	<407	<407		
2,4-Dinitrophenol	ug/kg	<2030	<2030		
2,4-Dinitrotoluene	ug/kg	<407	<407		
2,6-Dinitrotoluene	ug/kg	<407	<407		
2-Chloronaphthalene	ug/kg	<407	<407		
2-Chlorophenol	ug/kg	<407	<407		
2-Methylnaphthalene	ug/kg	<407	<407		
2-Methylphenol(o-Cresol)	ug/kg	<407	<407		
2-Nitroaniline	ug/kg	<2030	<2030		
2-Nitrophenol	ug/kg	<407	<407		
3&4-Methylphenol(m&p Cresol)	ug/kg	<407	<407		
3,3'-Dichlorobenzidine	ug/kg	<2030	<2030		
3-Nitroaniline	ug/kg	<2030	<2030		
4,6-Dinitro-2-methylphenol	ug/kg	<813	<813		
4-Bromophenylphenyl ether	ug/kg	<407	<407		
4-Chloro-3-methylphenol	ug/kg	<813	<813		
4-Chloroaniline	ug/kg	<2030	<2030		
4-Chlorophenylphenyl ether	ug/kg	<407	<407		
4-Nitroaniline	ug/kg	<813	<813		
4-Nitrophenol	ug/kg	<2030	<2030		
Acenaphthene	ug/kg	<407	<407		
Acenaphthylene	ug/kg	<407	<407		
Acetophenone	ug/kg	<407	<407		
Anthracene	ug/kg	<407	<407		
Atrazine	ug/kg	<813	<813		
Benzaldehyde	ug/kg	<813	<813		
Benzo(a)anthracene	ug/kg	<407	<407		
Benzo(a)pyrene	ug/kg	<407	<407		
Benzo(b)fluoranthene	ug/kg	<407	<407		
Benzo(g,h,i)perylene	ug/kg	<407	<407		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Marsh Pamplico

Pace Project No.: 92311939

SAMPLE DUPLICATE: 1820776

Parameter	Units	92311939009 Result	Dup Result	RPD	Qualifiers
Benzo(k)fluoranthene	ug/kg	<407	<407		
Biphenyl (Diphenyl)	ug/kg	<407	<407		
bis(2-Chloroethoxy)methane	ug/kg	<407	<407		
bis(2-Chloroethyl) ether	ug/kg	<407	<407		
bis(2-Ethylhexyl)phthalate	ug/kg	<407	<407		
Butylbenzylphthalate	ug/kg	<407	<407		
Caprolactam	ug/kg	<407	<407		
Carbazole	ug/kg	<407	<407		
Chrysene	ug/kg	<407	<407		
Di-n-butylphthalate	ug/kg	<407	<407		
Di-n-octylphthalate	ug/kg	<407	<407		
Dibenz(a,h)anthracene	ug/kg	<407	<407		
Dibenzofuran	ug/kg	<407	<407		
Diethylphthalate	ug/kg	<407	<407		
Dimethylphthalate	ug/kg	<407	<407		
Fluoranthene	ug/kg	<407	<407		
Fluorene	ug/kg	<407	<407		
Hexachloro-1,3-butadiene	ug/kg	<407	<407		
Hexachlorobenzene	ug/kg	<407	<407		
Hexachlorocyclopentadiene	ug/kg	<407	<407		
Hexachloroethane	ug/kg	<407	<407		
Indeno(1,2,3-cd)pyrene	ug/kg	<407	<407		
Isophorone	ug/kg	<407	<407		
N-Nitroso-di-n-propylamine	ug/kg	<407	<407		
N-Nitrosodiphenylamine	ug/kg	<407	<407		
Naphthalene	ug/kg	<407	<407		
Nitrobenzene	ug/kg	<407	<407		
Pentachlorophenol	ug/kg	<2030	<2030		
Phenanthrene	ug/kg	<407	<407		
Phenol	ug/kg	<407	<407		
Pyrene	ug/kg	<407	<407		
2,4,6-Tribromophenol (S)	%	39	46	16	
2-Fluorobiphenyl (S)	%	40	55	31	
2-Fluorophenol (S)	%	36	55	41	
Nitrobenzene-d5 (S)	%	39	54	32	
Phenol-d6 (S)	%	38	49	24	
Terphenyl-d14 (S)	%	42	47	13	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Marsh Pamplico
Pace Project No.: 92311939

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville
PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1 RPD value was outside control limits.
S0 Surrogate recovery outside laboratory control limits.
S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Marsh Pamplico
Pace Project No.: 92311939

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92311939009	D-1	EPA 3050	328346	EPA 6010	328402
92311939010	GC-2-1	EPA 3050	328346	EPA 6010	328402
92311939011	GC-2-6	EPA 3050	328346	EPA 6010	328402
92311939012	GC-4-6	EPA 3050	328346	EPA 6010	328402
92311939013	GC-3-6	EPA 3050	328346	EPA 6010	328402
92311939014	GC-1-1	EPA 3050	328346	EPA 6010	328402
92311939015	GC-1-6	EPA 3050	328346	EPA 6010	328402
92311939016	GC-4-1	EPA 3050	328346	EPA 6010	328402
92311939017	GC-3-1	EPA 3050	328346	EPA 6010	328402
92311939009	D-1	EPA 7471	328300	EPA 7471	328416
92311939010	GC-2-1	EPA 7471	328300	EPA 7471	328416
92311939011	GC-2-6	EPA 7471	328300	EPA 7471	328416
92311939012	GC-4-6	EPA 7471	328300	EPA 7471	328416
92311939013	GC-3-6	EPA 7471	328300	EPA 7471	328416
92311939014	GC-1-1	EPA 7471	328300	EPA 7471	328416
92311939015	GC-1-6	EPA 7471	328300	EPA 7471	328416
92311939016	GC-4-1	EPA 7471	328300	EPA 7471	328416
92311939017	GC-3-1	EPA 7471	328300	EPA 7471	328416
92311939001	GC-4-1	EPA 3546	328501	EPA 8270	328714
92311939002	GC-1-1	EPA 3546	328501	EPA 8270	328714
92311939003	GC-1-6	EPA 3546	328501	EPA 8270	328714
92311939004	GC-3-1	EPA 3546	328501	EPA 8270	328714
92311939005	GC-2-1	EPA 3546	328501	EPA 8270	328714
92311939006	GC-2-6	EPA 3546	328501	EPA 8270	328714
92311939007	GC-4-6	EPA 3546	328501	EPA 8270	328714
92311939008	GC-3-6	EPA 3546	328501	EPA 8270	328714
92311939009	D-1	EPA 3546	328501	EPA 8270	328714
92311939001	GC-4-1	ASTM D2974-87	328288		
92311939002	GC-1-1	ASTM D2974-87	328288		
92311939003	GC-1-6	ASTM D2974-87	328288		
92311939004	GC-3-1	ASTM D2974-87	328288		
92311939005	GC-2-1	ASTM D2974-87	328288		
92311939006	GC-2-6	ASTM D2974-87	328288		
92311939007	GC-4-6	ASTM D2974-87	328288		
92311939008	GC-3-6	ASTM D2974-87	328288		
92311939009	D-1	ASTM D2974-87	328288		
92311939010	GC-2-1	ASTM D2974-87	328288		
92311939011	GC-2-6	ASTM D2974-87	328288		
92311939012	GC-4-6	ASTM D2974-87	328288		
92311939013	GC-3-6	ASTM D2974-87	328288		
92311939014	GC-1-1	ASTM D2974-87	328288		
92311939015	GC-1-6	ASTM D2974-87	328293		
92311939016	GC-4-1	ASTM D2974-87	328293		
92311939017	GC-3-1	ASTM D2974-87	328293		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: S&ME Greensboro

Project # **WO# : 92311939**



Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____
 Thermometer: T1505 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Correction Factor: 0.0°C Cooler Temp Corrected (°C): 2.0C Biological Tissue Frozen? Yes No N/A

Temp should be above freezing to 6°C
 USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Samples Field Filtered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9. <i>All Soil Jars TIME is not match with COC TIME.</i>
-Includes Date/Time/ID/Analysis Matrix: <u>soil</u>	
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10. <i>only soil 250ml Bottle match (14-45)</i>
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	HNC3 pH<2 HCl pH<2 H2SO4 pH<2 NaOH pH>12 NaOH/ZnOAc pH>9
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples checked for dechlorination? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____
 Comments/Sample Discrepancy: _____

Project Manager SCURF Review: TC Date: 9/13/16

Project Manager SRF Review: TC Date: 9/13/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Required Client Information:

Company: S&M - Greensboro
 Address: 8646 West Market Street
 Greensboro, NC 27409
 Email: ehennoues@smeinc.com
 Phone: NONE
 Requested Due Date: 5/11/16

Section B

Required Project Information:

Report To: Ed Hennoues
 Copy To:
 Purchase Order #: 1584-98-146
 Project Name: Marsh Pamplico
 Project #: 584-98-146

Section C

Invoice Information:

Attention: S&M
 Company Name: S&M
 Address:
 Pace Quote:
 Pace Project Manager: troy.carter@paceclabs.com
 Pace Profile #: 2237-22

Regulatory Agency

State / Location:

NC

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / . -) Sample IDs must be unique	MATRIX	CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							Analyses Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
				START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol				
1	GC-4-1	Drinking Water	DW	9/12	11:25	11	1										001	
2	GC-1-1	Water	WT	9/12	11:35	11	1										002	
3	GC-2-1	Waste Water	WW	9/12	12:08	11	1										010	
4	GC-7-6	Product	P	9/12	3:48	11	1										003	
5	GC-2-6	Soil/Solid	SS	9/12	3:44	11	1										011	
6	GC-4-6	Oil	O	9/12	3:32	11	1										018	
7	GC-3-1	Wipe	WIP	9/12	3:57	11	1										004	
8	GC-3-6	Air	AIR	9/12	3:57	11	1										013	
9	GC-1-1	Other	OT	9/12	4:04	11	1										014	
10	GC-1-6	Tissue	TS	9/12	4:23	11	1										015	
11	GC-2-6			9/12	4:23	11	1										005	
12	GC-2-6			9/12	4:23	11	1										006	

ADDITIONAL COMMENTS

RELIQUISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

TEMP in C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Relinquished by: [Signature] S&M
 Date: 9/12
 Time: 13:18
 Accepted by: [Signature] Pace
 Date: 9/12
 Time: 01:50
 Temp in C: 20.0
 Received on Ice: Y
 Custody Sealed Cooler: NY
 Samples Intact: Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

[Signature]

SIGNATURE of SAMPLER:

[Signature]

DATE Signed:

9-5-16



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: S&ME - Greensboro	Report To: Ed Henriques	Attention: Company Name
Address: 8646 West Market Street	Copy To:	Address:
Greensboro, NC 27409	Purchase Order #:	Company Name:
Email: ehennriques@srmeinc.com	Project Name: Marsh Pamlico	Address:
Phone: NONE	Project #:	State / Location: NC
Requested Due Date:	Requested Analysis Filtered (Y/N):	Requested Analysis Filtered (Y/N):

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique	MATRIX	CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	Residual Chlorine (Y/N)	SAMPLE CONDITIONS	
				START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol					Other
1	GC-4-1	Drinking Water	DMV	9/12	11:24	11	1										X	010	
2	GC-4-6	Water	WT	9/12	14:25	11	1										X	007	
3	GC-3-1	Waste Water	WW	9/12	14:32	11	1										X	017	
4	GC-3-6	Product Solvent	P SL	9/12	14:45	11	1										X	008	
5	D-1	Oil	OL	9/12	14:45	11	1										X	009	
6		Wipe	WP																
7		Other	AR																
8		Tissue	TS																
9																			
10																			
11																			
12	ADDITIONAL COMMENTS																		

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Lyndel Butcher DATE Signed: 9-12-12

SIGNATURE of SAMPLER: [Signature]

RELINQUISHED BY / AFFILIATION

[Signature] DATE: 9/12 TIME: 13:18

ACCEPTED BY / AFFILIATION

[Signature] DATE: 9/12 TIME: 01:54

TEMP in C: 20

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y

September 23, 2016

Mr. Lyndal Butler
S&ME, Inc.
8646 West Market Street
Greensboro, NC 27409

RE: Project: MARSH/PAMPLICO 1584-98-1462
Pace Project No.: 92312680

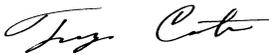
Dear Mr. Butler:

Enclosed are the analytical results for sample(s) received by the laboratory on September 16, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Trey Carter
treycarter@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92312680001	MW-10	Water	09/14/16 18:45	09/16/16 11:25
92312680002	MW-14	Water	09/14/16 16:50	09/16/16 11:25
92312680003	MW-15	Water	09/14/16 14:45	09/16/16 11:25
92312680004	MW-21	Water	09/15/16 15:20	09/16/16 11:25
92312680005	MW-22	Water	09/15/16 17:10	09/16/16 11:25
92312680006	MW-23	Water	09/15/16 13:40	09/16/16 11:25
92312680007	DUPLICATE	Water	09/15/16 07:00	09/16/16 11:25
92312680008	MW-17A	Water	09/15/16 12:10	09/16/16 11:25
92312680009	MW-19	Water	09/15/16 08:55	09/16/16 11:25
92312680010	MW-20	Water	09/15/16 10:15	09/16/16 11:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92312680001	MW-10	EPA 8270	BPJ	74	PASI-C
		SM 2320B	KDF	1	PASI-A
		SM 4500-CI-E	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92312680002	MW-14	EPA 8270	BPJ	74	PASI-C
		SM 2320B	KDF	1	PASI-A
		SM 4500-CI-E	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92312680003	MW-15	EPA 8270	BPJ	74	PASI-C
		SM 2320B	KDF	1	PASI-A
		SM 4500-CI-E	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92312680004	MW-21	EPA 8270	BPJ	74	PASI-C
		SM 2320B	KDF	1	PASI-A
		SM 4500-CI-E	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92312680005	MW-22	EPA 8270	BPJ	74	PASI-C
		SM 2320B	KDF	1	PASI-A
		SM 4500-CI-E	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92312680006	MW-23	EPA 8270	BPJ	74	PASI-C
		SM 2320B	KDF	1	PASI-A
		SM 4500-CI-E	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92312680007	DUPLICATE	EPA 8270	BPJ	74	PASI-C
92312680008	MW-17A	EPA 8270	BPJ	73	PASI-C
92312680009	MW-19	EPA 8270	BPJ	73	PASI-C
92312680010	MW-20	EPA 8270	BPJ	73	PASI-C

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: MARSH/PAMPLICO 1584-98-1462
Pace Project No.: 92312680

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92312680001	MW-10					
SM 2320B	Alkalinity, Total as CaCO ₃	302	mg/L	5.0	09/19/16 22:54	
SM 4500-Cl-E	Chloride	12.0	mg/L	1.0	09/20/16 18:56	
SM 5310B	Total Organic Carbon	1.9	mg/L	1.0	09/19/16 20:13	
92312680002	MW-14					
EPA 8270	Pentachlorophenol	214	ug/L	50.0	09/21/16 17:48	
SM 2320B	Alkalinity, Total as CaCO ₃	35.7	mg/L	5.0	09/19/16 23:28	
SM 4500-Cl-E	Chloride	8.4	mg/L	1.0	09/20/16 18:57	
SM 5310B	Total Organic Carbon	4.7	mg/L	1.0	09/19/16 20:46	
92312680003	MW-15					
SM 2320B	Alkalinity, Total as CaCO ₃	346	mg/L	5.0	09/19/16 23:39	
SM 4500-Cl-E	Chloride	25.2	mg/L	1.0	09/20/16 18:58	
SM 5310B	Total Organic Carbon	9.1	mg/L	1.0	09/19/16 20:57	
92312680004	MW-21					
EPA 8270	Pentachlorophenol	16.5J	ug/L	50.0	09/21/16 18:45	
SM 2320B	Alkalinity, Total as CaCO ₃	26.7	mg/L	5.0	09/19/16 23:56	
SM 4500-Cl-E	Chloride	8.9	mg/L	1.0	09/20/16 18:59	
SM 5310B	Total Organic Carbon	2.1	mg/L	1.0	09/19/16 21:09	
92312680005	MW-22					
SM 2320B	Alkalinity, Total as CaCO ₃	178	mg/L	5.0	09/20/16 00:05	
SM 4500-Cl-E	Chloride	5.7	mg/L	1.0	09/20/16 19:00	
92312680006	MW-23					
EPA 8270	Benzoic Acid	30.9J	ug/L	50.0	09/22/16 15:21	
SM 2320B	Alkalinity, Total as CaCO ₃	297	mg/L	5.0	09/20/16 00:17	
SM 4500-Cl-E	Chloride	7.1	mg/L	1.0	09/20/16 19:01	
SM 5310B	Total Organic Carbon	11.8	mg/L	1.0	09/19/16 21:30	
92312680007	DUPLICATE					
EPA 8270	Pentachlorophenol	21.5J	ug/L	50.0	09/22/16 16:54	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: MARSH/PAMPLICO 1584-98-1462
Pace Project No.: 92312680

Method: EPA 8270
Description: 8270 MSSV Semivolatile Organic
Client: S&ME - Greensboro
Date: September 23, 2016

General Information:

3 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

QC Batch: 329806

IS: The internal standard response is below criteria. Results may be biased high.

- DUP (Lab ID: 1827421)
 - 1,2,4,5-Tetrachlorobenzene
- MW-20 (Lab ID: 92312680010)
 - 1,2,4,5-Tetrachlorobenzene

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 329806

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92312680009

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1827420)
 - 2,6-Dinitrotoluene
 - 2-Chloronaphthalene

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PROJECT NARRATIVE

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Method: EPA 8270

Description: 8270 MSSV Semivolatile Organic

Client: S&ME - Greensboro

Date: September 23, 2016

QC Batch: 329806

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92312680009

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Benzaldehyde
- Caprolactam

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Method: EPA 8270

Description: 8270 MSSV Semivolatile Org SC

Client: S&ME - Greensboro

Date: September 23, 2016

General Information:

7 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 329204

S0: Surrogate recovery outside laboratory control limits.

- BLANK (Lab ID: 1824500)
 - 2,4,6-Tribromophenol (S)
 - 2-Fluorobiphenyl (S)
 - 2-Fluorophenol (S)
 - Phenol-d6 (S)
- DUPLICATE (Lab ID: 92312680007)
 - Terphenyl-d14 (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Method: EPA 8270

Description: 8270 MSSV Semivolatile Org SC

Client: S&ME - Greensboro

Date: September 23, 2016

Analyte Comments:

QC Batch: 329083

1g: Recovery did not meet 70-130% South Carolina required limits. Recovery meets method required in-house generated control limits.

- LCS (Lab ID: 1823810)
 - 2,4-Dinitrophenol
 - 4-Nitrophenol
 - Aniline
 - Benzoic Acid
 - N-Nitrosodimethylamine
 - Phenol
- MS (Lab ID: 1823811)
 - Benzoic Acid
 - N-Nitrosodimethylamine
 - Phenol
- MSD (Lab ID: 1823812)
 - Aniline
 - Benzoic Acid
 - N-Nitrosodimethylamine
 - Phenol

QC Batch: 329204

1g: Recovery did not meet 70-130% South Carolina required limits. Recovery meets method required in-house generated control limits.

- LCS (Lab ID: 1824501)
 - 2,4-Dinitrophenol
 - 4-Nitrophenol
 - Benzoic Acid
 - N-Nitrosodimethylamine
 - Phenol

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PROJECT NARRATIVE

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Method: SM 2320B

Description: 2320B Alkalinity

Client: S&ME - Greensboro

Date: September 23, 2016

General Information:

6 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Method: SM 4500-CI-E

Description: 4500 Chloride

Client: S&ME - Greensboro

Date: September 23, 2016

General Information:

6 samples were analyzed for SM 4500-CI-E. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 329332

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92312295005,92312680006

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1824945)
 - Chloride
- MSD (Lab ID: 1824946)
 - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Method: SM 5310B

Description: 5310B TOC

Client: S&ME - Greensboro

Date: September 23, 2016

General Information:

6 samples were analyzed for SM 5310B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 329244

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92312596035,92312715002

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1824624)
 - Total Organic Carbon
- MSD (Lab ID: 1824625)
 - Total Organic Carbon

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Sample: MW-10 **Lab ID: 92312680001** Collected: 09/14/16 18:45 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/18/16 14:26	09/21/16 17:20	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 17:20	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 17:20	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	09/18/16 14:26	09/21/16 17:20	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/18/16 14:26	09/21/16 17:20	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/18/16 14:26	09/21/16 17:20	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 17:20	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/18/16 14:26	09/21/16 17:20	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/18/16 14:26	09/21/16 17:20	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.5	1	09/18/16 14:26	09/21/16 17:20	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	09/18/16 14:26	09/21/16 17:20	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	09/18/16 14:26	09/21/16 17:20	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	09/18/16 14:26	09/21/16 17:20	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	09/18/16 14:26	09/21/16 17:20	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	09/18/16 14:26	09/21/16 17:20	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 17:20	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 17:20	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 17:20	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 17:20	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	09/18/16 14:26	09/21/16 17:20	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 17:20	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/18/16 14:26	09/21/16 17:20	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 17:20	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 17:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	09/18/16 14:26	09/21/16 17:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 17:20	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 17:20	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/18/16 14:26	09/21/16 17:20	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	09/18/16 14:26	09/21/16 17:20	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	09/18/16 14:26	09/21/16 17:20	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	09/18/16 14:26	09/21/16 17:20	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	09/18/16 14:26	09/21/16 17:20	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	09/18/16 14:26	09/21/16 17:20	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	09/18/16 14:26	09/21/16 17:20	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	09/18/16 14:26	09/21/16 17:20	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 17:20	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	09/18/16 14:26	09/21/16 17:20	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	09/18/16 14:26	09/21/16 17:20	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 17:20	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 17:20	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	09/18/16 14:26	09/21/16 17:20	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	09/18/16 14:26	09/21/16 17:20	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 17:20	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 17:20	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/18/16 14:26	09/21/16 17:20	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 17:20	78-59-1	

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-10 **Lab ID: 92312680001** Collected: 09/14/16 18:45 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC			Analytical Method: EPA 8270 Preparation Method: EPA 3510						
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	09/18/16 14:26	09/21/16 17:20	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 17:20	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	09/18/16 14:26	09/21/16 17:20	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 17:20		
Naphthalene	ND	ug/L	10.0	0.34	1	09/18/16 14:26	09/21/16 17:20	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 17:20	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 17:20	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 17:20	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 17:20	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 17:20	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	09/18/16 14:26	09/21/16 17:20	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 17:20	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	09/18/16 14:26	09/21/16 17:20	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 17:20	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 17:20	108-60-1	
Pentachlorophenol	ND	ug/L	50.0	4.6	1	09/18/16 14:26	09/21/16 17:20	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/18/16 14:26	09/21/16 17:20	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	09/18/16 14:26	09/21/16 17:20		
Pyrene	ND	ug/L	10.0	0.19	1	09/18/16 14:26	09/21/16 17:20	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 17:20	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 17:20	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 17:20	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	78	%	21-110		1	09/18/16 14:26	09/21/16 17:20	4165-60-0	
2-Fluorobiphenyl (S)	76	%	27-110		1	09/18/16 14:26	09/21/16 17:20	321-60-8	
Terphenyl-d14 (S)	78	%	31-107		1	09/18/16 14:26	09/21/16 17:20	1718-51-0	
Phenol-d6 (S)	34	%	10-110		1	09/18/16 14:26	09/21/16 17:20	13127-88-3	
2-Fluorophenol (S)	46	%	12-110		1	09/18/16 14:26	09/21/16 17:20	367-12-4	
2,4,6-Tribromophenol (S)	84	%	27-110		1	09/18/16 14:26	09/21/16 17:20	118-79-6	
2320B Alkalinity			Analytical Method: SM 2320B						
Alkalinity, Total as CaCO3	302	mg/L	5.0	1.0	1		09/19/16 22:54		
4500 Chloride			Analytical Method: SM 4500-Cl-E						
Chloride	12.0	mg/L	1.0	0.50	1		09/20/16 18:56	16887-00-6	
5310B TOC			Analytical Method: SM 5310B						
Total Organic Carbon	1.9	mg/L	1.0	0.50	1		09/19/16 20:13	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Sample: MW-14 **Lab ID: 92312680002** Collected: 09/14/16 16:50 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/18/16 14:26	09/21/16 17:48	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 17:48	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 17:48	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	09/18/16 14:26	09/21/16 17:48	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/18/16 14:26	09/21/16 17:48	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/18/16 14:26	09/21/16 17:48	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 17:48	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/18/16 14:26	09/21/16 17:48	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/18/16 14:26	09/21/16 17:48	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.5	1	09/18/16 14:26	09/21/16 17:48	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	09/18/16 14:26	09/21/16 17:48	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	09/18/16 14:26	09/21/16 17:48	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	09/18/16 14:26	09/21/16 17:48	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	09/18/16 14:26	09/21/16 17:48	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	09/18/16 14:26	09/21/16 17:48	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 17:48	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 17:48	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 17:48	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 17:48	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	09/18/16 14:26	09/21/16 17:48	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 17:48	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/18/16 14:26	09/21/16 17:48	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 17:48	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 17:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	09/18/16 14:26	09/21/16 17:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 17:48	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 17:48	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/18/16 14:26	09/21/16 17:48	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	09/18/16 14:26	09/21/16 17:48	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	09/18/16 14:26	09/21/16 17:48	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	09/18/16 14:26	09/21/16 17:48	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	09/18/16 14:26	09/21/16 17:48	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	09/18/16 14:26	09/21/16 17:48	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	09/18/16 14:26	09/21/16 17:48	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	09/18/16 14:26	09/21/16 17:48	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 17:48	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	09/18/16 14:26	09/21/16 17:48	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	09/18/16 14:26	09/21/16 17:48	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 17:48	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 17:48	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	09/18/16 14:26	09/21/16 17:48	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	09/18/16 14:26	09/21/16 17:48	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 17:48	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 17:48	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/18/16 14:26	09/21/16 17:48	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 17:48	78-59-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-14 **Lab ID: 92312680002** Collected: 09/14/16 16:50 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	09/18/16 14:26	09/21/16 17:48	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 17:48	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	09/18/16 14:26	09/21/16 17:48	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 17:48		
Naphthalene	ND	ug/L	10.0	0.34	1	09/18/16 14:26	09/21/16 17:48	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 17:48	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 17:48	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 17:48	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 17:48	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 17:48	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	09/18/16 14:26	09/21/16 17:48	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 17:48	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	09/18/16 14:26	09/21/16 17:48	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 17:48	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 17:48	108-60-1	
Pentachlorophenol	214	ug/L	50.0	4.6	1	09/18/16 14:26	09/21/16 17:48	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/18/16 14:26	09/21/16 17:48	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	09/18/16 14:26	09/21/16 17:48		
Pyrene	ND	ug/L	10.0	0.19	1	09/18/16 14:26	09/21/16 17:48	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 17:48	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 17:48	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 17:48	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	63	%	21-110		1	09/18/16 14:26	09/21/16 17:48	4165-60-0	
2-Fluorobiphenyl (S)	64	%	27-110		1	09/18/16 14:26	09/21/16 17:48	321-60-8	
Terphenyl-d14 (S)	62	%	31-107		1	09/18/16 14:26	09/21/16 17:48	1718-51-0	
Phenol-d6 (S)	28	%	10-110		1	09/18/16 14:26	09/21/16 17:48	13127-88-3	
2-Fluorophenol (S)	39	%	12-110		1	09/18/16 14:26	09/21/16 17:48	367-12-4	
2,4,6-Tribromophenol (S)	74	%	27-110		1	09/18/16 14:26	09/21/16 17:48	118-79-6	
2320B Alkalinity Analytical Method: SM 2320B									
Alkalinity, Total as CaCO3	35.7	mg/L	5.0	1.0	1		09/19/16 23:28		
4500 Chloride Analytical Method: SM 4500-Cl-E									
Chloride	8.4	mg/L	1.0	0.50	1		09/20/16 18:57	16887-00-6	
5310B TOC Analytical Method: SM 5310B									
Total Organic Carbon	4.7	mg/L	1.0	0.50	1		09/19/16 20:46	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Sample: MW-15 **Lab ID: 92312680003** Collected: 09/14/16 14:45 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/18/16 14:26	09/21/16 18:16	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 18:16	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 18:16	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	09/18/16 14:26	09/21/16 18:16	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/18/16 14:26	09/21/16 18:16	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/18/16 14:26	09/21/16 18:16	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 18:16	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/18/16 14:26	09/21/16 18:16	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/18/16 14:26	09/21/16 18:16	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.5	1	09/18/16 14:26	09/21/16 18:16	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	09/18/16 14:26	09/21/16 18:16	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	09/18/16 14:26	09/21/16 18:16	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	09/18/16 14:26	09/21/16 18:16	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	09/18/16 14:26	09/21/16 18:16	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	09/18/16 14:26	09/21/16 18:16	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 18:16	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 18:16	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 18:16	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 18:16	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	09/18/16 14:26	09/21/16 18:16	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 18:16	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/18/16 14:26	09/21/16 18:16	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 18:16	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 18:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	09/18/16 14:26	09/21/16 18:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 18:16	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 18:16	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/18/16 14:26	09/21/16 18:16	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	09/18/16 14:26	09/21/16 18:16	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	09/18/16 14:26	09/21/16 18:16	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	09/18/16 14:26	09/21/16 18:16	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	09/18/16 14:26	09/21/16 18:16	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	09/18/16 14:26	09/21/16 18:16	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	09/18/16 14:26	09/21/16 18:16	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	09/18/16 14:26	09/21/16 18:16	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 18:16	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	09/18/16 14:26	09/21/16 18:16	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	09/18/16 14:26	09/21/16 18:16	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 18:16	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 18:16	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	09/18/16 14:26	09/21/16 18:16	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	09/18/16 14:26	09/21/16 18:16	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 18:16	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 18:16	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/18/16 14:26	09/21/16 18:16	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 18:16	78-59-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-15 **Lab ID: 92312680003** Collected: 09/14/16 14:45 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC			Analytical Method: EPA 8270 Preparation Method: EPA 3510						
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	09/18/16 14:26	09/21/16 18:16	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 18:16	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	09/18/16 14:26	09/21/16 18:16	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 18:16		
Naphthalene	ND	ug/L	10.0	0.34	1	09/18/16 14:26	09/21/16 18:16	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 18:16	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 18:16	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 18:16	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 18:16	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 18:16	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	09/18/16 14:26	09/21/16 18:16	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 18:16	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	09/18/16 14:26	09/21/16 18:16	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 18:16	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 18:16	108-60-1	
Pentachlorophenol	ND	ug/L	50.0	4.6	1	09/18/16 14:26	09/21/16 18:16	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/18/16 14:26	09/21/16 18:16	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	09/18/16 14:26	09/21/16 18:16		
Pyrene	ND	ug/L	10.0	0.19	1	09/18/16 14:26	09/21/16 18:16	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 18:16	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 18:16	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 18:16	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	50	%	21-110		1	09/18/16 14:26	09/21/16 18:16	4165-60-0	
2-Fluorobiphenyl (S)	50	%	27-110		1	09/18/16 14:26	09/21/16 18:16	321-60-8	
Terphenyl-d14 (S)	43	%	31-107		1	09/18/16 14:26	09/21/16 18:16	1718-51-0	
Phenol-d6 (S)	24	%	10-110		1	09/18/16 14:26	09/21/16 18:16	13127-88-3	
2-Fluorophenol (S)	33	%	12-110		1	09/18/16 14:26	09/21/16 18:16	367-12-4	
2,4,6-Tribromophenol (S)	60	%	27-110		1	09/18/16 14:26	09/21/16 18:16	118-79-6	
2320B Alkalinity			Analytical Method: SM 2320B						
Alkalinity, Total as CaCO3	346	mg/L	5.0	1.0	1		09/19/16 23:39		
4500 Chloride			Analytical Method: SM 4500-Cl-E						
Chloride	25.2	mg/L	1.0	0.50	1		09/20/16 18:58	16887-00-6	
5310B TOC			Analytical Method: SM 5310B						
Total Organic Carbon	9.1	mg/L	1.0	0.50	1		09/19/16 20:57	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Sample: MW-21 **Lab ID: 92312680004** Collected: 09/15/16 15:20 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/18/16 14:26	09/21/16 18:45	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 18:45	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 18:45	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	09/18/16 14:26	09/21/16 18:45	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/18/16 14:26	09/21/16 18:45	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/18/16 14:26	09/21/16 18:45	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 18:45	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/18/16 14:26	09/21/16 18:45	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/18/16 14:26	09/21/16 18:45	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.5	1	09/18/16 14:26	09/21/16 18:45	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	09/18/16 14:26	09/21/16 18:45	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	09/18/16 14:26	09/21/16 18:45	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	09/18/16 14:26	09/21/16 18:45	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	09/18/16 14:26	09/21/16 18:45	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	09/18/16 14:26	09/21/16 18:45	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 18:45	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 18:45	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 18:45	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 18:45	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	09/18/16 14:26	09/21/16 18:45	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 18:45	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/18/16 14:26	09/21/16 18:45	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 18:45	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 18:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	09/18/16 14:26	09/21/16 18:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 18:45	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 18:45	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/18/16 14:26	09/21/16 18:45	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	09/18/16 14:26	09/21/16 18:45	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	09/18/16 14:26	09/21/16 18:45	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	09/18/16 14:26	09/21/16 18:45	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	09/18/16 14:26	09/21/16 18:45	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	09/18/16 14:26	09/21/16 18:45	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	09/18/16 14:26	09/21/16 18:45	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	09/18/16 14:26	09/21/16 18:45	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 18:45	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	09/18/16 14:26	09/21/16 18:45	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	09/18/16 14:26	09/21/16 18:45	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 18:45	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 18:45	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	09/18/16 14:26	09/21/16 18:45	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	09/18/16 14:26	09/21/16 18:45	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 18:45	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 18:45	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/18/16 14:26	09/21/16 18:45	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 18:45	78-59-1	

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-21 **Lab ID: 92312680004** Collected: 09/15/16 15:20 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	09/18/16 14:26	09/21/16 18:45	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 18:45	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	09/18/16 14:26	09/21/16 18:45	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 18:45		
Naphthalene	ND	ug/L	10.0	0.34	1	09/18/16 14:26	09/21/16 18:45	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 18:45	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 18:45	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 18:45	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 18:45	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 18:45	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	09/18/16 14:26	09/21/16 18:45	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 18:45	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	09/18/16 14:26	09/21/16 18:45	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 18:45	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 18:45	108-60-1	
Pentachlorophenol	16.5J	ug/L	50.0	4.6	1	09/18/16 14:26	09/21/16 18:45	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/18/16 14:26	09/21/16 18:45	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	09/18/16 14:26	09/21/16 18:45		
Pyrene	ND	ug/L	10.0	0.19	1	09/18/16 14:26	09/21/16 18:45	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 18:45	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 18:45	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 18:45	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	64	%	21-110		1	09/18/16 14:26	09/21/16 18:45	4165-60-0	
2-Fluorobiphenyl (S)	63	%	27-110		1	09/18/16 14:26	09/21/16 18:45	321-60-8	
Terphenyl-d14 (S)	66	%	31-107		1	09/18/16 14:26	09/21/16 18:45	1718-51-0	
Phenol-d6 (S)	28	%	10-110		1	09/18/16 14:26	09/21/16 18:45	13127-88-3	
2-Fluorophenol (S)	39	%	12-110		1	09/18/16 14:26	09/21/16 18:45	367-12-4	
2,4,6-Tribromophenol (S)	67	%	27-110		1	09/18/16 14:26	09/21/16 18:45	118-79-6	
2320B Alkalinity Analytical Method: SM 2320B									
Alkalinity, Total as CaCO3	26.7	mg/L	5.0	1.0	1		09/19/16 23:56		
4500 Chloride Analytical Method: SM 4500-Cl-E									
Chloride	8.9	mg/L	1.0	0.50	1		09/20/16 18:59	16887-00-6	
5310B TOC Analytical Method: SM 5310B									
Total Organic Carbon	2.1	mg/L	1.0	0.50	1		09/19/16 21:09	7440-44-0	

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Sample: MW-22 **Lab ID: 92312680005** Collected: 09/15/16 17:10 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC			Analytical Method: EPA 8270 Preparation Method: EPA 3510						
Acenaphthene	ND	ug/L	10.0	0.25	1	09/18/16 14:26	09/21/16 19:13	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 19:13	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 19:13	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	09/18/16 14:26	09/21/16 19:13	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/18/16 14:26	09/21/16 19:13	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/18/16 14:26	09/21/16 19:13	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 19:13	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/18/16 14:26	09/21/16 19:13	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/18/16 14:26	09/21/16 19:13	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.5	1	09/18/16 14:26	09/21/16 19:13	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	09/18/16 14:26	09/21/16 19:13	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	09/18/16 14:26	09/21/16 19:13	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	09/18/16 14:26	09/21/16 19:13	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	09/18/16 14:26	09/21/16 19:13	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	09/18/16 14:26	09/21/16 19:13	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 19:13	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 19:13	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 19:13	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 19:13	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	09/18/16 14:26	09/21/16 19:13	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 19:13	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/18/16 14:26	09/21/16 19:13	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 19:13	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 19:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	09/18/16 14:26	09/21/16 19:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 19:13	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 19:13	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/18/16 14:26	09/21/16 19:13	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	09/18/16 14:26	09/21/16 19:13	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	09/18/16 14:26	09/21/16 19:13	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	09/18/16 14:26	09/21/16 19:13	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	09/18/16 14:26	09/21/16 19:13	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	09/18/16 14:26	09/21/16 19:13	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	09/18/16 14:26	09/21/16 19:13	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	09/18/16 14:26	09/21/16 19:13	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 19:13	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	09/18/16 14:26	09/21/16 19:13	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	09/18/16 14:26	09/21/16 19:13	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 19:13	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/18/16 14:26	09/21/16 19:13	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	09/18/16 14:26	09/21/16 19:13	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	09/18/16 14:26	09/21/16 19:13	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	09/18/16 14:26	09/21/16 19:13	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 19:13	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/18/16 14:26	09/21/16 19:13	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	09/18/16 14:26	09/21/16 19:13	78-59-1	

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-22 **Lab ID: 92312680005** Collected: 09/15/16 17:10 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	09/18/16 14:26	09/21/16 19:13	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/18/16 14:26	09/21/16 19:13	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	09/18/16 14:26	09/21/16 19:13	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	09/18/16 14:26	09/21/16 19:13		
Naphthalene	ND	ug/L	10.0	0.34	1	09/18/16 14:26	09/21/16 19:13	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 19:13	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	09/18/16 14:26	09/21/16 19:13	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	09/18/16 14:26	09/21/16 19:13	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	09/18/16 14:26	09/21/16 19:13	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 19:13	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	09/18/16 14:26	09/21/16 19:13	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	09/18/16 14:26	09/21/16 19:13	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	09/18/16 14:26	09/21/16 19:13	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	09/18/16 14:26	09/21/16 19:13	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	0.95	1	09/18/16 14:26	09/21/16 19:13	108-60-1	
Pentachlorophenol	ND	ug/L	50.0	4.6	1	09/18/16 14:26	09/21/16 19:13	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/18/16 14:26	09/21/16 19:13	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	09/18/16 14:26	09/21/16 19:13		
Pyrene	ND	ug/L	10.0	0.19	1	09/18/16 14:26	09/21/16 19:13	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	09/18/16 14:26	09/21/16 19:13	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	09/18/16 14:26	09/21/16 19:13	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	09/18/16 14:26	09/21/16 19:13	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	71	%	21-110		1	09/18/16 14:26	09/21/16 19:13	4165-60-0	
2-Fluorobiphenyl (S)	68	%	27-110		1	09/18/16 14:26	09/21/16 19:13	321-60-8	
Terphenyl-d14 (S)	74	%	31-107		1	09/18/16 14:26	09/21/16 19:13	1718-51-0	
Phenol-d6 (S)	30	%	10-110		1	09/18/16 14:26	09/21/16 19:13	13127-88-3	
2-Fluorophenol (S)	45	%	12-110		1	09/18/16 14:26	09/21/16 19:13	367-12-4	
2,4,6-Tribromophenol (S)	69	%	27-110		1	09/18/16 14:26	09/21/16 19:13	118-79-6	
2320B Alkalinity Analytical Method: SM 2320B									
Alkalinity, Total as CaCO3	178	mg/L	5.0	1.0	1		09/20/16 00:05		
4500 Chloride Analytical Method: SM 4500-Cl-E									
Chloride	5.7	mg/L	1.0	0.50	1		09/20/16 19:00	16887-00-6	
5310B TOC Analytical Method: SM 5310B									
Total Organic Carbon	ND	mg/L	1.0	0.50	1		09/19/16 21:19	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-23 **Lab ID: 92312680006** Collected: 09/15/16 13:40 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/19/16 00:00	09/22/16 15:21	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/19/16 00:00	09/22/16 15:21	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	09/19/16 00:00	09/22/16 15:21	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	09/19/16 00:00	09/22/16 15:21	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/19/16 00:00	09/22/16 15:21	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/19/16 00:00	09/22/16 15:21	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/19/16 00:00	09/22/16 15:21	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/19/16 00:00	09/22/16 15:21	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/19/16 00:00	09/22/16 15:21	207-08-9	
Benzoic Acid	30.9J	ug/L	50.0	11.5	1	09/19/16 00:00	09/22/16 15:21	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	09/19/16 00:00	09/22/16 15:21	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	09/19/16 00:00	09/22/16 15:21	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	09/19/16 00:00	09/22/16 15:21	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	09/19/16 00:00	09/22/16 15:21	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	09/19/16 00:00	09/22/16 15:21	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	09/19/16 00:00	09/22/16 15:21	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	09/19/16 00:00	09/22/16 15:21	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	09/19/16 00:00	09/22/16 15:21	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	09/19/16 00:00	09/22/16 15:21	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	09/19/16 00:00	09/22/16 15:21	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/19/16 00:00	09/22/16 15:21	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/19/16 00:00	09/22/16 15:21	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	09/19/16 00:00	09/22/16 15:21	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	09/19/16 00:00	09/22/16 15:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	09/19/16 00:00	09/22/16 15:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	09/19/16 00:00	09/22/16 15:21	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	09/19/16 00:00	09/22/16 15:21	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/19/16 00:00	09/22/16 15:21	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	09/19/16 00:00	09/22/16 15:21	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	09/19/16 00:00	09/22/16 15:21	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	09/19/16 00:00	09/22/16 15:21	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	09/19/16 00:00	09/22/16 15:21	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	09/19/16 00:00	09/22/16 15:21	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	09/19/16 00:00	09/22/16 15:21	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	09/19/16 00:00	09/22/16 15:21	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	09/19/16 00:00	09/22/16 15:21	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	09/19/16 00:00	09/22/16 15:21	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	09/19/16 00:00	09/22/16 15:21	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/19/16 00:00	09/22/16 15:21	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/19/16 00:00	09/22/16 15:21	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	09/19/16 00:00	09/22/16 15:21	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	09/19/16 00:00	09/22/16 15:21	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	09/19/16 00:00	09/22/16 15:21	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	09/19/16 00:00	09/22/16 15:21	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/19/16 00:00	09/22/16 15:21	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	09/19/16 00:00	09/22/16 15:21	78-59-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Project No.: 92312680

Sample: MW-23 **Lab ID: 92312680006** Collected: 09/15/16 13:40 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	09/19/16 00:00	09/22/16 15:21	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/19/16 00:00	09/22/16 15:21	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	09/19/16 00:00	09/22/16 15:21	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	09/19/16 00:00	09/22/16 15:21		
Naphthalene	ND	ug/L	10.0	0.34	1	09/19/16 00:00	09/22/16 15:21	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	09/19/16 00:00	09/22/16 15:21	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	09/19/16 00:00	09/22/16 15:21	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	09/19/16 00:00	09/22/16 15:21	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	09/19/16 00:00	09/22/16 15:21	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	09/19/16 00:00	09/22/16 15:21	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	09/19/16 00:00	09/22/16 15:21	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	09/19/16 00:00	09/22/16 15:21	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	09/19/16 00:00	09/22/16 15:21	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	09/19/16 00:00	09/22/16 15:21	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	0.95	1	09/19/16 00:00	09/22/16 15:21	108-60-1	
Pentachlorophenol	ND	ug/L	50.0	4.6	1	09/19/16 00:00	09/22/16 15:21	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/19/16 00:00	09/22/16 15:21	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	09/19/16 00:00	09/22/16 15:21		
Pyrene	ND	ug/L	10.0	0.19	1	09/19/16 00:00	09/22/16 15:21	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	09/19/16 00:00	09/22/16 15:21	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	09/19/16 00:00	09/22/16 15:21	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	09/19/16 00:00	09/22/16 15:21	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	72	%	21-110		1	09/19/16 00:00	09/22/16 15:21	4165-60-0	
2-Fluorobiphenyl (S)	69	%	27-110		1	09/19/16 00:00	09/22/16 15:21	321-60-8	
Terphenyl-d14 (S)	79	%	31-107		1	09/19/16 00:00	09/22/16 15:21	1718-51-0	
Phenol-d6 (S)	31	%	10-110		1	09/19/16 00:00	09/22/16 15:21	13127-88-3	
2-Fluorophenol (S)	40	%	12-110		1	09/19/16 00:00	09/22/16 15:21	367-12-4	
2,4,6-Tribromophenol (S)	80	%	27-110		1	09/19/16 00:00	09/22/16 15:21	118-79-6	
2320B Alkalinity Analytical Method: SM 2320B									
Alkalinity, Total as CaCO3	297	mg/L	5.0	1.0	1		09/20/16 00:17		
4500 Chloride Analytical Method: SM 4500-Cl-E									
Chloride	7.1	mg/L	1.0	0.50	1		09/20/16 19:01	16887-00-6	
5310B TOC Analytical Method: SM 5310B									
Total Organic Carbon	11.8	mg/L	1.0	0.50	1		09/19/16 21:30	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: DUPLICATE **Lab ID: 92312680007** Collected: 09/15/16 07:00 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/19/16 00:00	09/22/16 16:54	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/19/16 00:00	09/22/16 16:54	208-96-8	
Aniline	ND	ug/L	10.0	2.0	1	09/19/16 00:00	09/22/16 16:54	62-53-3	
Anthracene	ND	ug/L	10.0	0.14	1	09/19/16 00:00	09/22/16 16:54	120-12-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/19/16 00:00	09/22/16 16:54	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/19/16 00:00	09/22/16 16:54	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/19/16 00:00	09/22/16 16:54	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/19/16 00:00	09/22/16 16:54	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/19/16 00:00	09/22/16 16:54	207-08-9	
Benzoic Acid	ND	ug/L	50.0	11.5	1	09/19/16 00:00	09/22/16 16:54	65-85-0	
Benzyl alcohol	ND	ug/L	20.0	2.4	1	09/19/16 00:00	09/22/16 16:54	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	10.0	0.82	1	09/19/16 00:00	09/22/16 16:54	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.79	1	09/19/16 00:00	09/22/16 16:54	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	20.0	3.7	1	09/19/16 00:00	09/22/16 16:54	59-50-7	
4-Chloroaniline	ND	ug/L	50.0	2.8	1	09/19/16 00:00	09/22/16 16:54	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.92	1	09/19/16 00:00	09/22/16 16:54	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	09/19/16 00:00	09/22/16 16:54	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	0.98	1	09/19/16 00:00	09/22/16 16:54	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.3	1	09/19/16 00:00	09/22/16 16:54	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	0.87	1	09/19/16 00:00	09/22/16 16:54	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/19/16 00:00	09/22/16 16:54	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/19/16 00:00	09/22/16 16:54	53-70-3	
Dibenzofuran	ND	ug/L	10.0	0.89	1	09/19/16 00:00	09/22/16 16:54	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.88	1	09/19/16 00:00	09/22/16 16:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.81	1	09/19/16 00:00	09/22/16 16:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.95	1	09/19/16 00:00	09/22/16 16:54	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	50.0	2.1	1	09/19/16 00:00	09/22/16 16:54	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/19/16 00:00	09/22/16 16:54	120-83-2	
Diethylphthalate	ND	ug/L	10.0	0.58	1	09/19/16 00:00	09/22/16 16:54	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	1.2	1	09/19/16 00:00	09/22/16 16:54	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	0.76	1	09/19/16 00:00	09/22/16 16:54	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	0.75	1	09/19/16 00:00	09/22/16 16:54	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	2.6	1	09/19/16 00:00	09/22/16 16:54	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	9.0	1	09/19/16 00:00	09/22/16 16:54	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	0.90	1	09/19/16 00:00	09/22/16 16:54	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	0.98	1	09/19/16 00:00	09/22/16 16:54	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.66	1	09/19/16 00:00	09/22/16 16:54	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.79	1	09/19/16 00:00	09/22/16 16:54	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/19/16 00:00	09/22/16 16:54	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/19/16 00:00	09/22/16 16:54	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	0.94	1	09/19/16 00:00	09/22/16 16:54	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	0.72	1	09/19/16 00:00	09/22/16 16:54	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	0.88	1	09/19/16 00:00	09/22/16 16:54	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.1	1	09/19/16 00:00	09/22/16 16:54	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/19/16 00:00	09/22/16 16:54	193-39-5	
Isophorone	ND	ug/L	10.0	0.89	1	09/19/16 00:00	09/22/16 16:54	78-59-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Sample: DUPLICATE **Lab ID: 92312680007** Collected: 09/15/16 07:00 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Org SC			Analytical Method: EPA 8270 Preparation Method: EPA 3510						
1-Methylnaphthalene	ND	ug/L	10.0	0.32	1	09/19/16 00:00	09/22/16 16:54	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/19/16 00:00	09/22/16 16:54	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.6	1	09/19/16 00:00	09/22/16 16:54	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	2.0	1	09/19/16 00:00	09/22/16 16:54		
Naphthalene	ND	ug/L	10.0	0.34	1	09/19/16 00:00	09/22/16 16:54	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.0	1	09/19/16 00:00	09/22/16 16:54	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.0	1	09/19/16 00:00	09/22/16 16:54	99-09-2	
4-Nitroaniline	ND	ug/L	50.0	2.1	1	09/19/16 00:00	09/22/16 16:54	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.1	1	09/19/16 00:00	09/22/16 16:54	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	0.91	1	09/19/16 00:00	09/22/16 16:54	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	4.1	1	09/19/16 00:00	09/22/16 16:54	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	10.0	0.91	1	09/19/16 00:00	09/22/16 16:54	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	0.99	1	09/19/16 00:00	09/22/16 16:54	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.0	1	09/19/16 00:00	09/22/16 16:54	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	0.95	1	09/19/16 00:00	09/22/16 16:54	108-60-1	
Pentachlorophenol	21.5J	ug/L	50.0	4.6	1	09/19/16 00:00	09/22/16 16:54	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/19/16 00:00	09/22/16 16:54	85-01-8	
Phenol	ND	ug/L	10.0	1.9	1	09/19/16 00:00	09/22/16 16:54		
Pyrene	ND	ug/L	10.0	0.19	1	09/19/16 00:00	09/22/16 16:54	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	0.98	1	09/19/16 00:00	09/22/16 16:54	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	10.0	0.92	1	09/19/16 00:00	09/22/16 16:54	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.3	1	09/19/16 00:00	09/22/16 16:54	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	88	%	21-110		1	09/19/16 00:00	09/22/16 16:54	4165-60-0	
2-Fluorobiphenyl (S)	84	%	27-110		1	09/19/16 00:00	09/22/16 16:54	321-60-8	
Terphenyl-d14 (S)	112	%	31-107		1	09/19/16 00:00	09/22/16 16:54	1718-51-0	S0
Phenol-d6 (S)	31	%	10-110		1	09/19/16 00:00	09/22/16 16:54	13127-88-3	
2-Fluorophenol (S)	48	%	12-110		1	09/19/16 00:00	09/22/16 16:54	367-12-4	
2,4,6-Tribromophenol (S)	90	%	27-110		1	09/19/16 00:00	09/22/16 16:54	118-79-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-17A **Lab ID: 92312680008** Collected: 09/15/16 12:10 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Organic Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/22/16 09:39	09/22/16 18:18	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 18:18	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	09/22/16 09:39	09/22/16 18:18	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	09/22/16 09:39	09/22/16 18:18	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	09/22/16 09:39	09/22/16 18:18	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	09/22/16 09:39	09/22/16 18:18	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/22/16 09:39	09/22/16 18:18	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/22/16 09:39	09/22/16 18:18	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/22/16 09:39	09/22/16 18:18	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/22/16 09:39	09/22/16 18:18	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/22/16 09:39	09/22/16 18:18	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	09/22/16 09:39	09/22/16 18:18	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 18:18	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	09/22/16 09:39	09/22/16 18:18	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:18	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	09/22/16 09:39	09/22/16 18:18	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	09/22/16 09:39	09/22/16 18:18	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	09/22/16 09:39	09/22/16 18:18	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 18:18	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 18:18	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 18:18	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	09/22/16 09:39	09/22/16 18:18	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 18:18	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/22/16 09:39	09/22/16 18:18	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:18	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	09/22/16 09:39	09/22/16 18:18	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 18:18	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 18:18	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 18:18	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	09/22/16 09:39	09/22/16 18:18	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	09/22/16 09:39	09/22/16 18:18	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	09/22/16 09:39	09/22/16 18:18	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	09/22/16 09:39	09/22/16 18:18	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	09/22/16 09:39	09/22/16 18:18	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	09/22/16 09:39	09/22/16 18:18	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 18:18	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 18:18	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:18	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	09/22/16 09:39	09/22/16 18:18	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:18	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 18:18	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/22/16 09:39	09/22/16 18:18	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:18	78-59-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-17A **Lab ID: 92312680008** Collected: 09/15/16 12:10 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Organic			Analytical Method: EPA 8270 Preparation Method: EPA 3510						
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/22/16 09:39	09/22/16 18:18	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18		
Naphthalene	ND	ug/L	10.0	0.34	1	09/22/16 09:39	09/22/16 18:18	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	09/22/16 09:39	09/22/16 18:18	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	09/22/16 09:39	09/22/16 18:18	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	09/22/16 09:39	09/22/16 18:18	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	09/22/16 09:39	09/22/16 18:18	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	09/22/16 09:39	09/22/16 18:18	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 18:18	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	09/22/16 09:39	09/22/16 18:18	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	09/22/16 09:39	09/22/16 18:18	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/22/16 09:39	09/22/16 18:18	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18		
Pyrene	ND	ug/L	10.0	0.19	1	09/22/16 09:39	09/22/16 18:18	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:18	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	09/22/16 09:39	09/22/16 18:18	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 18:18	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	09/22/16 09:39	09/22/16 18:18	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	81	%	21-110		1	09/22/16 09:39	09/22/16 18:18	4165-60-0	
2-Fluorobiphenyl (S)	77	%	27-110		1	09/22/16 09:39	09/22/16 18:18	321-60-8	
Terphenyl-d14 (S)	79	%	31-107		1	09/22/16 09:39	09/22/16 18:18	1718-51-0	
Phenol-d6 (S)	31	%	10-110		1	09/22/16 09:39	09/22/16 18:18	13127-88-3	
2-Fluorophenol (S)	43	%	12-110		1	09/22/16 09:39	09/22/16 18:18	367-12-4	
2,4,6-Tribromophenol (S)	86	%	27-110		1	09/22/16 09:39	09/22/16 18:18	118-79-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-19 **Lab ID: 92312680009** Collected: 09/15/16 08:55 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Organic Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/22/16 09:39	09/22/16 18:46	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 18:46	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	09/22/16 09:39	09/22/16 18:46	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	09/22/16 09:39	09/22/16 18:46	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	09/22/16 09:39	09/22/16 18:46	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	09/22/16 09:39	09/22/16 18:46	100-52-7	M1
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/22/16 09:39	09/22/16 18:46	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/22/16 09:39	09/22/16 18:46	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/22/16 09:39	09/22/16 18:46	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/22/16 09:39	09/22/16 18:46	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/22/16 09:39	09/22/16 18:46	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	09/22/16 09:39	09/22/16 18:46	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 18:46	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	09/22/16 09:39	09/22/16 18:46	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:46	105-60-2	M1
Carbazole	ND	ug/L	10.0	0.73	1	09/22/16 09:39	09/22/16 18:46	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	09/22/16 09:39	09/22/16 18:46	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	09/22/16 09:39	09/22/16 18:46	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 18:46	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 18:46	91-58-7	M1
2-Chlorophenol	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 18:46	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	09/22/16 09:39	09/22/16 18:46	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 18:46	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/22/16 09:39	09/22/16 18:46	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:46	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	09/22/16 09:39	09/22/16 18:46	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 18:46	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 18:46	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 18:46	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	09/22/16 09:39	09/22/16 18:46	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	09/22/16 09:39	09/22/16 18:46	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	09/22/16 09:39	09/22/16 18:46	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	09/22/16 09:39	09/22/16 18:46	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46	606-20-2	M1
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	09/22/16 09:39	09/22/16 18:46	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	09/22/16 09:39	09/22/16 18:46	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 18:46	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 18:46	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:46	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	09/22/16 09:39	09/22/16 18:46	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:46	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 18:46	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/22/16 09:39	09/22/16 18:46	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 18:46	78-59-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-19 **Lab ID: 92312680009** Collected: 09/15/16 08:55 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Organic			Analytical Method: EPA 8270 Preparation Method: EPA 3510						
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/22/16 09:39	09/22/16 18:46	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46		
Naphthalene	ND	ug/L	10.0	0.34	1	09/22/16 09:39	09/22/16 18:46	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	09/22/16 09:39	09/22/16 18:46	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	09/22/16 09:39	09/22/16 18:46	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	09/22/16 09:39	09/22/16 18:46	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	09/22/16 09:39	09/22/16 18:46	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	09/22/16 09:39	09/22/16 18:46	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 18:46	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	09/22/16 09:39	09/22/16 18:46	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	09/22/16 09:39	09/22/16 18:46	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/22/16 09:39	09/22/16 18:46	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46		
Pyrene	ND	ug/L	10.0	0.19	1	09/22/16 09:39	09/22/16 18:46	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 18:46	95-94-3	
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	09/22/16 09:39	09/22/16 18:46	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 18:46	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	09/22/16 09:39	09/22/16 18:46	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	78	%	21-110		1	09/22/16 09:39	09/22/16 18:46	4165-60-0	
2-Fluorobiphenyl (S)	76	%	27-110		1	09/22/16 09:39	09/22/16 18:46	321-60-8	
Terphenyl-d14 (S)	83	%	31-107		1	09/22/16 09:39	09/22/16 18:46	1718-51-0	
Phenol-d6 (S)	33	%	10-110		1	09/22/16 09:39	09/22/16 18:46	13127-88-3	
2-Fluorophenol (S)	46	%	12-110		1	09/22/16 09:39	09/22/16 18:46	367-12-4	
2,4,6-Tribromophenol (S)	84	%	27-110		1	09/22/16 09:39	09/22/16 18:46	118-79-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-20 **Lab ID: 92312680010** Collected: 09/15/16 10:15 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Organic Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	10.0	0.25	1	09/22/16 09:39	09/22/16 19:14	83-32-9	
Acenaphthylene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 19:14	208-96-8	
Acetophenone	ND	ug/L	10.0	2.0	1	09/22/16 09:39	09/22/16 19:14	98-86-2	
Anthracene	ND	ug/L	10.0	0.14	1	09/22/16 09:39	09/22/16 19:14	120-12-7	
Atrazine	ND	ug/L	20.0	1.7	1	09/22/16 09:39	09/22/16 19:14	1912-24-9	
Benzaldehyde	ND	ug/L	20.0	4.7	1	09/22/16 09:39	09/22/16 19:14	100-52-7	
Benzo(a)anthracene	ND	ug/L	10.0	0.33	1	09/22/16 09:39	09/22/16 19:14	56-55-3	
Benzo(a)pyrene	ND	ug/L	10.0	0.30	1	09/22/16 09:39	09/22/16 19:14	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	0.28	1	09/22/16 09:39	09/22/16 19:14	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	10.0	0.38	1	09/22/16 09:39	09/22/16 19:14	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	10.0	0.43	1	09/22/16 09:39	09/22/16 19:14	207-08-9	
Biphenyl (Diphenyl)	ND	ug/L	10.0	1.9	1	09/22/16 09:39	09/22/16 19:14	92-52-4	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 19:14	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	0.75	1	09/22/16 09:39	09/22/16 19:14	85-68-7	
Caprolactam	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 19:14	105-60-2	
Carbazole	ND	ug/L	10.0	0.73	1	09/22/16 09:39	09/22/16 19:14	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	20.0	4.2	1	09/22/16 09:39	09/22/16 19:14	59-50-7	
4-Chloroaniline	ND	ug/L	20.0	3.4	1	09/22/16 09:39	09/22/16 19:14	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 19:14	111-44-4	
2-Chloronaphthalene	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 19:14	91-58-7	
2-Chlorophenol	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 19:14	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	2.1	1	09/22/16 09:39	09/22/16 19:14	7005-72-3	
Chrysene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 19:14	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	10.0	0.55	1	09/22/16 09:39	09/22/16 19:14	53-70-3	
Dibenzofuran	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 19:14	132-64-9	
3,3'-Dichlorobenzidine	ND	ug/L	20.0	1.4	1	09/22/16 09:39	09/22/16 19:14	91-94-1	
2,4-Dichlorophenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14	120-83-2	
Diethylphthalate	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 19:14	84-66-2	
2,4-Dimethylphenol	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 19:14	105-67-9	
Dimethylphthalate	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 19:14	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.1	1	09/22/16 09:39	09/22/16 19:14	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	20.0	1.7	1	09/22/16 09:39	09/22/16 19:14	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	6.5	1	09/22/16 09:39	09/22/16 19:14	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	10.0	1.2	1	09/22/16 09:39	09/22/16 19:14	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	0.86	1	09/22/16 09:39	09/22/16 19:14	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	6.0	0.85	1	09/22/16 09:39	09/22/16 19:14	117-81-7	
Fluoranthene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 19:14	206-44-0	
Fluorene	ND	ug/L	10.0	0.21	1	09/22/16 09:39	09/22/16 19:14	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 19:14	87-68-3	
Hexachlorobenzene	ND	ug/L	10.0	1.1	1	09/22/16 09:39	09/22/16 19:14	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 19:14	77-47-4	
Hexachloroethane	ND	ug/L	10.0	1.5	1	09/22/16 09:39	09/22/16 19:14	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	10.0	0.29	1	09/22/16 09:39	09/22/16 19:14	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	09/22/16 09:39	09/22/16 19:14	78-59-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARSH/PAMPLICO 1584-98-1462

Sample Project No.: 92312680

Sample: MW-20 Lab ID: 92312680010 Collected: 09/15/16 10:15 Received: 09/16/16 11:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
8270 MSSV Semivolatile Organic									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
2-Methylnaphthalene	ND	ug/L	10.0	0.28	1	09/22/16 09:39	09/22/16 19:14	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14		
Naphthalene	ND	ug/L	10.0	0.34	1	09/22/16 09:39	09/22/16 19:14	91-20-3	
2-Nitroaniline	ND	ug/L	50.0	2.8	1	09/22/16 09:39	09/22/16 19:14	88-74-4	
3-Nitroaniline	ND	ug/L	50.0	2.4	1	09/22/16 09:39	09/22/16 19:14	99-09-2	
4-Nitroaniline	ND	ug/L	20.0	2.5	1	09/22/16 09:39	09/22/16 19:14	100-01-6	
Nitrobenzene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14	98-95-3	
2-Nitrophenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	5.8	1	09/22/16 09:39	09/22/16 19:14	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/L	10.0	2.1	1	09/22/16 09:39	09/22/16 19:14	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	10.0	1.3	1	09/22/16 09:39	09/22/16 19:14	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	10.0	1.6	1	09/22/16 09:39	09/22/16 19:14	108-60-1	
Pentachlorophenol	ND	ug/L	25.0	2.3	1	09/22/16 09:39	09/22/16 19:14	87-86-5	
Phenanthrene	ND	ug/L	10.0	0.22	1	09/22/16 09:39	09/22/16 19:14	85-01-8	
Phenol	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14		
Pyrene	ND	ug/L	10.0	0.19	1	09/22/16 09:39	09/22/16 19:14	129-00-0	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	10.0	1.7	1	09/22/16 09:39	09/22/16 19:14	95-94-3	IS
2,3,4,6-Tetrachlorophenol	ND	ug/L	10.0	2.3	1	09/22/16 09:39	09/22/16 19:14	58-90-2	
2,4,5-Trichlorophenol	ND	ug/L	10.0	2.2	1	09/22/16 09:39	09/22/16 19:14	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.9	1	09/22/16 09:39	09/22/16 19:14	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	76	%	21-110		1	09/22/16 09:39	09/22/16 19:14	4165-60-0	
2-Fluorobiphenyl (S)	77	%	27-110		1	09/22/16 09:39	09/22/16 19:14	321-60-8	
Terphenyl-d14 (S)	93	%	31-107		1	09/22/16 09:39	09/22/16 19:14	1718-51-0	
Phenol-d6 (S)	31	%	10-110		1	09/22/16 09:39	09/22/16 19:14	13127-88-3	
2-Fluorophenol (S)	43	%	12-110		1	09/22/16 09:39	09/22/16 19:14	367-12-4	
2,4,6-Tribromophenol (S)	83	%	27-110		1	09/22/16 09:39	09/22/16 19:14	118-79-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

QC Batch: 329806

Analysis Method: EPA 8270

QC Batch Method: EPA 3510

Analysis Description: 8270 Water MSSV

Associated Lab Samples: 92312680008, 92312680009, 92312680010

METHOD BLANK: 1827418

Matrix: Water

Associated Lab Samples: 92312680008, 92312680009, 92312680010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	10.0	1.7	09/22/16 17:49	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	1.6	09/22/16 17:49	
2,3,4,6-Tetrachlorophenol	ug/L	ND	10.0	2.3	09/22/16 17:49	
2,4,5-Trichlorophenol	ug/L	ND	10.0	2.2	09/22/16 17:49	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.9	09/22/16 17:49	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	09/22/16 17:49	
2,4-Dimethylphenol	ug/L	ND	10.0	2.2	09/22/16 17:49	
2,4-Dinitrophenol	ug/L	ND	50.0	6.5	09/22/16 17:49	
2,4-Dinitrotoluene	ug/L	ND	10.0	1.2	09/22/16 17:49	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.7	09/22/16 17:49	
2-Chloronaphthalene	ug/L	ND	10.0	2.2	09/22/16 17:49	
2-Chlorophenol	ug/L	ND	10.0	1.5	09/22/16 17:49	
2-Methylnaphthalene	ug/L	ND	10.0	0.28	09/22/16 17:49	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.7	09/22/16 17:49	
2-Nitroaniline	ug/L	ND	50.0	2.8	09/22/16 17:49	
2-Nitrophenol	ug/L	ND	10.0	1.7	09/22/16 17:49	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	1.7	09/22/16 17:49	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	1.4	09/22/16 17:49	
3-Nitroaniline	ug/L	ND	50.0	2.4	09/22/16 17:49	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	1.7	09/22/16 17:49	
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.3	09/22/16 17:49	
4-Chloro-3-methylphenol	ug/L	ND	20.0	4.2	09/22/16 17:49	
4-Chloroaniline	ug/L	ND	20.0	3.4	09/22/16 17:49	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	2.1	09/22/16 17:49	
4-Nitroaniline	ug/L	ND	20.0	2.5	09/22/16 17:49	
4-Nitrophenol	ug/L	ND	50.0	5.8	09/22/16 17:49	
Acenaphthene	ug/L	ND	10.0	0.25	09/22/16 17:49	
Acenaphthylene	ug/L	ND	10.0	0.21	09/22/16 17:49	
Acetophenone	ug/L	ND	10.0	2.0	09/22/16 17:49	
Anthracene	ug/L	ND	10.0	0.14	09/22/16 17:49	
Atrazine	ug/L	ND	20.0	1.7	09/22/16 17:49	
Benzaldehyde	ug/L	ND	20.0	4.7	09/22/16 17:49	
Benzo(a)anthracene	ug/L	ND	10.0	0.33	09/22/16 17:49	
Benzo(a)pyrene	ug/L	ND	10.0	0.30	09/22/16 17:49	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.28	09/22/16 17:49	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.38	09/22/16 17:49	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.43	09/22/16 17:49	
Biphenyl (Diphenyl)	ug/L	ND	10.0	1.9	09/22/16 17:49	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	1.7	09/22/16 17:49	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.5	09/22/16 17:49	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.85	09/22/16 17:49	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

METHOD BLANK: 1827418

Matrix: Water

Associated Lab Samples: 92312680008, 92312680009, 92312680010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Butylbenzylphthalate	ug/L	ND	10.0	0.75	09/22/16 17:49	
Caprolactam	ug/L	ND	10.0	1.8	09/22/16 17:49	
Carbazole	ug/L	ND	10.0	0.73	09/22/16 17:49	
Chrysene	ug/L	ND	10.0	0.21	09/22/16 17:49	
Di-n-butylphthalate	ug/L	ND	10.0	1.1	09/22/16 17:49	
Di-n-octylphthalate	ug/L	ND	10.0	0.86	09/22/16 17:49	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.55	09/22/16 17:49	
Dibenzofuran	ug/L	ND	10.0	1.8	09/22/16 17:49	
Diethylphthalate	ug/L	ND	10.0	1.3	09/22/16 17:49	
Dimethylphthalate	ug/L	ND	10.0	1.5	09/22/16 17:49	
Fluoranthene	ug/L	ND	10.0	0.21	09/22/16 17:49	
Fluorene	ug/L	ND	10.0	0.21	09/22/16 17:49	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	09/22/16 17:49	
Hexachlorobenzene	ug/L	ND	10.0	1.1	09/22/16 17:49	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.8	09/22/16 17:49	
Hexachloroethane	ug/L	ND	10.0	1.5	09/22/16 17:49	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	0.29	09/22/16 17:49	
Isophorone	ug/L	ND	10.0	1.8	09/22/16 17:49	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	2.1	09/22/16 17:49	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.3	09/22/16 17:49	
Naphthalene	ug/L	ND	10.0	0.34	09/22/16 17:49	
Nitrobenzene	ug/L	ND	10.0	1.7	09/22/16 17:49	
Pentachlorophenol	ug/L	ND	25.0	2.3	09/22/16 17:49	
Phenanthrene	ug/L	ND	10.0	0.22	09/22/16 17:49	
Phenol	ug/L	ND	10.0	1.7	09/22/16 17:49	
Pyrene	ug/L	ND	10.0	0.19	09/22/16 17:49	
2,4,6-Tribromophenol (S)	%	67	27-110		09/22/16 17:49	
2-Fluorobiphenyl (S)	%	85	27-110		09/22/16 17:49	
2-Fluorophenol (S)	%	40	12-110		09/22/16 17:49	
Nitrobenzene-d5 (S)	%	84	21-110		09/22/16 17:49	
Phenol-d6 (S)	%	31	10-110		09/22/16 17:49	
Terphenyl-d14 (S)	%	103	31-107		09/22/16 17:49	

LABORATORY CONTROL SAMPLE: 1827419

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	25	19.8	79	16-129	
2,2'-Oxybis(1-chloropropane)	ug/L	25	25.1	100	18-120	
2,3,4,6-Tetrachlorophenol	ug/L	25	28.4	114	54-276	
2,4,5-Trichlorophenol	ug/L	25	25.2	101	43-113	
2,4,6-Trichlorophenol	ug/L	25	25.0	100	42-120	
2,4-Dichlorophenol	ug/L	25	23.7	95	30-120	
2,4-Dimethylphenol	ug/L	25	25.5	102	29-111	
2,4-Dinitrophenol	ug/L	125	103	82	19-132	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

LABORATORY CONTROL SAMPLE: 1827419

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	25	26.7	107	58-128	
2,6-Dinitrotoluene	ug/L	25	28.3	113	54-129	
2-Chloronaphthalene	ug/L	25	27.1	108	43-117	
2-Chlorophenol	ug/L	25	21.7	87	37-120	
2-Methylnaphthalene	ug/L	25	22.3	89	33-120	
2-Methylphenol(o-Cresol)	ug/L	25	20.9	84	31-120	
2-Nitroaniline	ug/L	50	45.8J	92	48-121	
2-Nitrophenol	ug/L	25	25.5	102	25-116	
3&4-Methylphenol(m&p Cresol)	ug/L	25	17.4	69	23-120	
3,3'-Dichlorobenzidine	ug/L	125	47.3	38	10-154	
3-Nitroaniline	ug/L	50	43.2J	86	43-115	
4,6-Dinitro-2-methylphenol	ug/L	50	52.9	106	44-124	
4-Bromophenylphenyl ether	ug/L	25	23.9	96	34-113	
4-Chloro-3-methylphenol	ug/L	50	46.5	93	31-110	
4-Chloroaniline	ug/L	50	42.0	84	20-120	
4-Chlorophenylphenyl ether	ug/L	25	23.6	94	34-116	
4-Nitroaniline	ug/L	50	43.1	86	46-128	
4-Nitrophenol	ug/L	125	43.2J	35	11-120	
Acenaphthene	ug/L	25	23.2	93	48-114	
Acenaphthylene	ug/L	25	23.9	96	48-112	
Acetophenone	ug/L	25	23.3	93	24-120	
Anthracene	ug/L	25	23.4	94	57-118	
Atrazine	ug/L	25	26.7	107	33-160	
Benzaldehyde	ug/L	25	7.7J	31	10-120	
Benzo(a)anthracene	ug/L	25	22.8	91	56-121	
Benzo(a)pyrene	ug/L	25	22.4	89	55-127	
Benzo(b)fluoranthene	ug/L	25	24.2	97	53-128	
Benzo(g,h,i)perylene	ug/L	25	22.6	90	54-125	
Benzo(k)fluoranthene	ug/L	25	23.0	92	51-123	
Biphenyl (Diphenyl)	ug/L	25	21.1	84	38-120	
bis(2-Chloroethoxy)methane	ug/L	25	24.0	96	32-120	
bis(2-Chloroethyl) ether	ug/L	25	24.9	100	33-111	
bis(2-Ethylhexyl)phthalate	ug/L	25	25.4	102	50-145	
Butylbenzylphthalate	ug/L	25	27.0	108	54-138	
Caprolactam	ug/L	25	7.0J	28	10-115	
Carbazole	ug/L	25	21.5	86	59-119	
Chrysene	ug/L	25	22.9	92	58-127	
Di-n-butylphthalate	ug/L	25	24.2	97	56-125	
Di-n-octylphthalate	ug/L	25	22.8	91	50-134	
Dibenz(a,h)anthracene	ug/L	25	22.7	91	53-129	
Dibenzofuran	ug/L	25	22.2	89	45-120	
Diethylphthalate	ug/L	25	23.9	96	53-120	
Dimethylphthalate	ug/L	25	22.8	91	55-116	
Fluoranthene	ug/L	25	23.6	94	57-125	
Fluorene	ug/L	25	24.3	97	53-118	
Hexachloro-1,3-butadiene	ug/L	25	19.7	79	23-120	
Hexachlorobenzene	ug/L	25	23.6	94	49-116	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462
Pace Project No.: 92312680

LABORATORY CONTROL SAMPLE: 1827419

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorocyclopentadiene	ug/L	25	22.0	88	26-158	
Hexachloroethane	ug/L	25	20.7	83	30-114	
Indeno(1,2,3-cd)pyrene	ug/L	25	22.4	90	55-128	
Isophorone	ug/L	25	25.0	100	31-118	
N-Nitroso-di-n-propylamine	ug/L	25	23.3	93	32-119	
N-Nitrosodiphenylamine	ug/L	25	21.4	86	43-120	
Naphthalene	ug/L	25	21.5	86	32-120	
Nitrobenzene	ug/L	25	24.2	97	33-110	
Pentachlorophenol	ug/L	125	49.7	40	10-137	
Phenanthrene	ug/L	25	23.4	93	57-117	
Phenol	ug/L	25	11.7	47	10-120	
Pyrene	ug/L	25	24.0	96	55-122	
2,4,6-Tribromophenol (S)	%			94	27-110	
2-Fluorobiphenyl (S)	%			86	27-110	
2-Fluorophenol (S)	%			54	12-110	
Nitrobenzene-d5 (S)	%			87	21-110	
Phenol-d6 (S)	%			38	10-110	
Terphenyl-d14 (S)	%			99	31-107	

MATRIX SPIKE SAMPLE: 1827420

Parameter	Units	92312680009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	25	20.8	83	50-150	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	25	24.8	99	50-150	
2,3,4,6-Tetrachlorophenol	ug/L	ND	25	19.4	78	50-150	
2,4,5-Trichlorophenol	ug/L	ND	25	23.8	95	19-105	
2,4,6-Trichlorophenol	ug/L	ND	25	24.7	99	13-108	
2,4-Dichlorophenol	ug/L	ND	25	23.4	94	29-111	
2,4-Dimethylphenol	ug/L	ND	25	25.5	102	21-103	
2,4-Dinitrophenol	ug/L	ND	125	104	83	10-109	
2,4-Dinitrotoluene	ug/L	ND	25	25.5	102	27-104	
2,6-Dinitrotoluene	ug/L	ND	25	26.8	107	28-101 M1	
2-Chloronaphthalene	ug/L	ND	25	27.6	111	14-102 M1	
2-Chlorophenol	ug/L	ND	25	21.4	86	16-110	
2-Methylnaphthalene	ug/L	ND	25	23.4	94	13-110	
2-Methylphenol(o-Cresol)	ug/L	ND	25	21.2	85	19-110	
2-Nitroaniline	ug/L	ND	50	43.1J	86	26-103	
2-Nitrophenol	ug/L	ND	25	26.3	105	20-110	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	25	17.9	72	20-110	
3,3'-Dichlorobenzidine	ug/L	ND	125	43.0	34	25-112	
3-Nitroaniline	ug/L	ND	50	41.9J	84	29-110	
4,6-Dinitro-2-methylphenol	ug/L	ND	50	53.8	108	10-117	
4-Bromophenylphenyl ether	ug/L	ND	25	23.6	94	20-105	
4-Chloro-3-methylphenol	ug/L	ND	50	45.9	92	22-110	
4-Chloroaniline	ug/L	ND	50	41.3	83	20-100	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

MATRIX SPIKE SAMPLE: 1827420		92312680009	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
4-Chlorophenylphenyl ether	ug/L	ND	25	22.9	92	19-102	
4-Nitroaniline	ug/L	ND	50	43.5	87	29-110	
4-Nitrophenol	ug/L	ND	125	44.2J	35	10-110	
Acenaphthene	ug/L	ND	25	22.8	91	17-100	
Acenaphthylene	ug/L	ND	25	23.6	94	21-100	
Acetophenone	ug/L	ND	25	23.7	95	50-150	
Anthracene	ug/L	ND	25	23.2	93	24-109	
Atrazine	ug/L	ND	25	26.3	105	50-150	
Benzaldehyde	ug/L	ND	25	ND	19	50-150 M1	
Benzo(a)anthracene	ug/L	ND	25	22.3	89	22-117	
Benzo(a)pyrene	ug/L	ND	25	22.3	89	23-104	
Benzo(b)fluoranthene	ug/L	ND	25	24.0	96	23-103	
Benzo(g,h,i)perylene	ug/L	ND	25	21.7	87	18-111	
Benzo(k)fluoranthene	ug/L	ND	25	22.3	89	22-113	
Biphenyl (Diphenyl)	ug/L	ND	25	20.9	84	50-150	
bis(2-Chloroethoxy)methane	ug/L	ND	25	24.1	96	22-110	
bis(2-Chloroethyl) ether	ug/L	ND	25	23.3	93	16-110	
bis(2-Ethylhexyl)phthalate	ug/L	ND	25	25.4	101	23-102	
Butylbenzylphthalate	ug/L	ND	25	26.5	106	25-110	
Caprolactam	ug/L	ND	25	5.9J	23	50-150 M1	
Carbazole	ug/L	ND	25	22.0	88	50-150	
Chrysene	ug/L	ND	25	22.0	88	23-115	
Di-n-butylphthalate	ug/L	ND	25	24.5	98	26-110	
Di-n-octylphthalate	ug/L	ND	25	22.7	91	22-110	
Dibenz(a,h)anthracene	ug/L	ND	25	21.6	86	21-112	
Dibenzofuran	ug/L	ND	25	21.8	87	19-102	
Diethylphthalate	ug/L	ND	25	22.6	90	29-110	
Dimethylphthalate	ug/L	ND	25	21.6	87	27-110	
Fluoranthene	ug/L	ND	25	24.4	98	23-112	
Fluorene	ug/L	ND	25	23.1	93	22-104	
Hexachloro-1,3-butadiene	ug/L	ND	25	20.3	81	10-110	
Hexachlorobenzene	ug/L	ND	25	23.4	94	21-116	
Hexachlorocyclopentadiene	ug/L	ND	25	24.1	96	10-110	
Hexachloroethane	ug/L	ND	25	21.1	85	10-110	
Indeno(1,2,3-cd)pyrene	ug/L	ND	25	21.4	86	20-113	
Isophorone	ug/L	ND	25	25.3	101	50-150	
N-Nitroso-di-n-propylamine	ug/L	ND	25	23.7	95	21-105	
N-Nitrosodiphenylamine	ug/L	ND	25	21.3	85	23-107	
Naphthalene	ug/L	ND	25	22.4	90	10-110	
Nitrobenzene	ug/L	ND	25	24.9	100	20-110	
Pentachlorophenol	ug/L	ND	125	53.4	43	10-118	
Phenanthrene	ug/L	ND	25	23.2	93	24-106	
Phenol	ug/L	ND	25	11.5	46	12-110	
Pyrene	ug/L	ND	25	23.5	94	24-114	
2,4,6-Tribromophenol (S)	%				95	27-110	
2-Fluorobiphenyl (S)	%				82	27-110	
2-Fluorophenol (S)	%				50	12-110	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

MATRIX SPIKE SAMPLE: 1827420		92312680009	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Nitrobenzene-d5 (S)	%				86	21-110	
Phenol-d6 (S)	%				36	10-110	
Terphenyl-d14 (S)	%				91	31-107	

SAMPLE DUPLICATE: 1827421

Parameter	Units	92312680010	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,2,4,5-Tetrachlorobenzene	ug/L	ND	ND		30	IS
2,2'-Oxybis(1-chloropropane)	ug/L	ND	ND		30	
2,3,4,6-Tetrachlorophenol	ug/L	ND	ND		30	
2,4,5-Trichlorophenol	ug/L	ND	ND		30	
2,4,6-Trichlorophenol	ug/L	ND	ND		30	
2,4-Dichlorophenol	ug/L	ND	ND		30	
2,4-Dimethylphenol	ug/L	ND	ND		30	
2,4-Dinitrophenol	ug/L	ND	ND		30	
2,4-Dinitrotoluene	ug/L	ND	ND		30	
2,6-Dinitrotoluene	ug/L	ND	ND		30	
2-Chloronaphthalene	ug/L	ND	ND		30	
2-Chlorophenol	ug/L	ND	ND		30	
2-Methylnaphthalene	ug/L	ND	ND		30	
2-Methylphenol(o-Cresol)	ug/L	ND	ND		30	
2-Nitroaniline	ug/L	ND	ND		30	
2-Nitrophenol	ug/L	ND	ND		30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	ND		30	
3,3'-Dichlorobenzidine	ug/L	ND	ND		30	
3-Nitroaniline	ug/L	ND	ND		30	
4,6-Dinitro-2-methylphenol	ug/L	ND	ND		30	
4-Bromophenylphenyl ether	ug/L	ND	ND		30	
4-Chloro-3-methylphenol	ug/L	ND	ND		30	
4-Chloroaniline	ug/L	ND	ND		30	
4-Chlorophenylphenyl ether	ug/L	ND	ND		30	
4-Nitroaniline	ug/L	ND	ND		30	
4-Nitrophenol	ug/L	ND	ND		30	
Acenaphthene	ug/L	ND	ND		30	
Acenaphthylene	ug/L	ND	ND		30	
Acetophenone	ug/L	ND	ND		30	
Anthracene	ug/L	ND	ND		30	
Atrazine	ug/L	ND	ND		30	
Benzaldehyde	ug/L	ND	ND		30	
Benzo(a)anthracene	ug/L	ND	ND		30	
Benzo(a)pyrene	ug/L	ND	ND		30	
Benzo(b)fluoranthene	ug/L	ND	ND		30	
Benzo(g,h,i)perylene	ug/L	ND	ND		30	
Benzo(k)fluoranthene	ug/L	ND	ND		30	
Biphenyl (Diphenyl)	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

SAMPLE DUPLICATE: 1827421

Parameter	Units	92312680010 Result	Dup Result	RPD	Max RPD	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	ND	ND		30	
bis(2-Chloroethyl) ether	ug/L	ND	ND		30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	ND		30	
Butylbenzylphthalate	ug/L	ND	ND		30	
Caprolactam	ug/L	ND	ND		30	
Carbazole	ug/L	ND	ND		30	
Chrysene	ug/L	ND	ND		30	
Di-n-butylphthalate	ug/L	ND	ND		30	
Di-n-octylphthalate	ug/L	ND	ND		30	
Dibenz(a,h)anthracene	ug/L	ND	ND		30	
Dibenzofuran	ug/L	ND	ND		30	
Diethylphthalate	ug/L	ND	ND		30	
Dimethylphthalate	ug/L	ND	ND		30	
Fluoranthene	ug/L	ND	ND		30	
Fluorene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Hexachlorobenzene	ug/L	ND	ND		30	
Hexachlorocyclopentadiene	ug/L	ND	ND		30	
Hexachloroethane	ug/L	ND	ND		30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND		30	
Isophorone	ug/L	ND	ND		30	
N-Nitroso-di-n-propylamine	ug/L	ND	ND		30	
N-Nitrosodiphenylamine	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
Nitrobenzene	ug/L	ND	ND		30	
Pentachlorophenol	ug/L	ND	ND		30	
Phenanthrene	ug/L	ND	ND		30	
Phenol	ug/L	ND	ND		30	
Pyrene	ug/L	ND	ND		30	
2,4,6-Tribromophenol (S)	%	83	83	1		
2-Fluorobiphenyl (S)	%	77	74	5		
2-Fluorophenol (S)	%	43	41	6		
Nitrobenzene-d5 (S)	%	76	75	1		
Phenol-d6 (S)	%	31	32	3		
Terphenyl-d14 (S)	%	93	102	9		

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

QC Batch: 329083

Analysis Method: EPA 8270

QC Batch Method: EPA 3510

Analysis Description: 8270 Water MSSV SC

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005

METHOD BLANK: 1823809

Matrix: Water

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	10.0	0.98	09/20/16 19:29	
1,2-Dichlorobenzene	ug/L	ND	10.0	0.88	09/20/16 19:29	
1,3-Dichlorobenzene	ug/L	ND	10.0	0.81	09/20/16 19:29	
1,4-Dichlorobenzene	ug/L	ND	10.0	0.95	09/20/16 19:29	
1-Methylnaphthalene	ug/L	ND	10.0	0.32	09/20/16 19:29	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	0.95	09/20/16 19:29	
2,4,5-Trichlorophenol	ug/L	ND	10.0	0.92	09/20/16 19:29	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.3	09/20/16 19:29	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	09/20/16 19:29	
2,4-Dimethylphenol	ug/L	ND	10.0	1.2	09/20/16 19:29	
2,4-Dinitrophenol	ug/L	ND	50.0	9.0	09/20/16 19:29	
2,4-Dinitrotoluene	ug/L	ND	10.0	0.90	09/20/16 19:29	
2,6-Dinitrotoluene	ug/L	ND	10.0	0.98	09/20/16 19:29	
2-Chloronaphthalene	ug/L	ND	10.0	0.98	09/20/16 19:29	
2-Chlorophenol	ug/L	ND	10.0	1.3	09/20/16 19:29	
2-Methylnaphthalene	ug/L	ND	10.0	0.28	09/20/16 19:29	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.6	09/20/16 19:29	
2-Nitroaniline	ug/L	ND	50.0	2.0	09/20/16 19:29	
2-Nitrophenol	ug/L	ND	10.0	0.91	09/20/16 19:29	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	2.0	09/20/16 19:29	
3,3'-Dichlorobenzidine	ug/L	ND	50.0	2.1	09/20/16 19:29	
3-Nitroaniline	ug/L	ND	50.0	2.0	09/20/16 19:29	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	2.6	09/20/16 19:29	
4-Bromophenylphenyl ether	ug/L	ND	10.0	0.82	09/20/16 19:29	
4-Chloro-3-methylphenol	ug/L	ND	20.0	3.7	09/20/16 19:29	
4-Chloroaniline	ug/L	ND	50.0	2.8	09/20/16 19:29	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	0.87	09/20/16 19:29	
4-Nitroaniline	ug/L	ND	50.0	2.1	09/20/16 19:29	
4-Nitrophenol	ug/L	ND	50.0	4.1	09/20/16 19:29	
Acenaphthene	ug/L	ND	10.0	0.25	09/20/16 19:29	
Acenaphthylene	ug/L	ND	10.0	0.21	09/20/16 19:29	
Aniline	ug/L	ND	10.0	2.0	09/20/16 19:29	
Anthracene	ug/L	ND	10.0	0.14	09/20/16 19:29	
Benzo(a)anthracene	ug/L	ND	10.0	0.33	09/20/16 19:29	
Benzo(a)pyrene	ug/L	ND	10.0	0.30	09/20/16 19:29	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.28	09/20/16 19:29	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.38	09/20/16 19:29	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.43	09/20/16 19:29	
Benzoic Acid	ug/L	ND	50.0	11.5	09/20/16 19:29	
Benzyl alcohol	ug/L	ND	20.0	2.4	09/20/16 19:29	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	0.92	09/20/16 19:29	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

METHOD BLANK: 1823809

Matrix: Water

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.0	09/20/16 19:29	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.79	09/20/16 19:29	
Butylbenzylphthalate	ug/L	ND	10.0	0.79	09/20/16 19:29	
Chrysene	ug/L	ND	10.0	0.21	09/20/16 19:29	
Di-n-butylphthalate	ug/L	ND	10.0	0.75	09/20/16 19:29	
Di-n-octylphthalate	ug/L	ND	10.0	0.66	09/20/16 19:29	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.55	09/20/16 19:29	
Dibenzofuran	ug/L	ND	10.0	0.89	09/20/16 19:29	
Diethylphthalate	ug/L	ND	10.0	0.58	09/20/16 19:29	
Dimethylphthalate	ug/L	ND	10.0	0.76	09/20/16 19:29	
Fluoranthene	ug/L	ND	10.0	0.21	09/20/16 19:29	
Fluorene	ug/L	ND	10.0	0.21	09/20/16 19:29	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	0.94	09/20/16 19:29	
Hexachlorobenzene	ug/L	ND	10.0	0.72	09/20/16 19:29	
Hexachlorocyclopentadiene	ug/L	ND	10.0	0.88	09/20/16 19:29	
Hexachloroethane	ug/L	ND	10.0	1.1	09/20/16 19:29	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	0.29	09/20/16 19:29	
Isophorone	ug/L	ND	10.0	0.89	09/20/16 19:29	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	0.99	09/20/16 19:29	
N-Nitrosodimethylamine	ug/L	ND	10.0	0.91	09/20/16 19:29	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.0	09/20/16 19:29	
Naphthalene	ug/L	ND	10.0	0.34	09/20/16 19:29	
Nitrobenzene	ug/L	ND	10.0	1.1	09/20/16 19:29	
Pentachlorophenol	ug/L	ND	50.0	4.6	09/20/16 19:29	
Phenanthrene	ug/L	ND	10.0	0.22	09/20/16 19:29	
Phenol	ug/L	ND	10.0	1.9	09/20/16 19:29	
Pyrene	ug/L	ND	10.0	0.19	09/20/16 19:29	
2,4,6-Tribromophenol (S)	%	87	27-110		09/20/16 19:29	
2-Fluorobiphenyl (S)	%	74	27-110		09/20/16 19:29	
2-Fluorophenol (S)	%	50	12-110		09/20/16 19:29	
Nitrobenzene-d5 (S)	%	74	21-110		09/20/16 19:29	
Phenol-d6 (S)	%	35	10-110		09/20/16 19:29	
Terphenyl-d14 (S)	%	93	31-107		09/20/16 19:29	

LABORATORY CONTROL SAMPLE: 1823810

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	44.6	89	70-130	
1,2-Dichlorobenzene	ug/L	50	42.2	84	70-130	
1,3-Dichlorobenzene	ug/L	50	42.1	84	70-130	
1,4-Dichlorobenzene	ug/L	50	41.4	83	70-130	
1-Methylnaphthalene	ug/L	50	46.3	93	70-130	
2,2'-Oxybis(1-chloropropane)	ug/L	50	42.6	85	70-130	
2,4,5-Trichlorophenol	ug/L	50	49.0	98	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

LABORATORY CONTROL SAMPLE: 1823810

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,6-Trichlorophenol	ug/L	50	48.5	97	70-130	
2,4-Dichlorophenol	ug/L	50	48.1	96	70-130	
2,4-Dimethylphenol	ug/L	50	54.4	109	70-130	
2,4-Dinitrophenol	ug/L	250	160	64	70-130	1g
2,4-Dinitrotoluene	ug/L	50	53.0	106	70-130	
2,6-Dinitrotoluene	ug/L	50	53.1	106	70-130	
2-Chloronaphthalene	ug/L	50	44.5	89	70-130	
2-Chlorophenol	ug/L	50	45.9	92	70-130	
2-Methylnaphthalene	ug/L	50	46.9	94	70-130	
2-Methylphenol(o-Cresol)	ug/L	50	48.4	97	70-130	
2-Nitroaniline	ug/L	100	84.8	85	70-130	
2-Nitrophenol	ug/L	50	47.7	95	70-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	42.7	85	70-130	
3,3'-Dichlorobenzidine	ug/L	100	78.0	78	70-130	
3-Nitroaniline	ug/L	100	80.6	81	70-130	
4,6-Dinitro-2-methylphenol	ug/L	100	94.9	95	70-130	
4-Bromophenylphenyl ether	ug/L	50	47.2	94	70-130	
4-Chloro-3-methylphenol	ug/L	100	97.3	97	70-130	
4-Chloroaniline	ug/L	100	78.9	79	70-130	
4-Chlorophenylphenyl ether	ug/L	50	49.5	99	70-130	
4-Nitroaniline	ug/L	100	85.4	85	70-130	
4-Nitrophenol	ug/L	250	117	47	70-130	1g
Acenaphthene	ug/L	50	46.1	92	70-130	
Acenaphthylene	ug/L	50	45.7	91	70-130	
Aniline	ug/L	50	33.7	67	70-130	1g
Anthracene	ug/L	50	44.7	89	70-130	
Benzo(a)anthracene	ug/L	50	45.1	90	70-130	
Benzo(a)pyrene	ug/L	50	47.2	94	70-130	
Benzo(b)fluoranthene	ug/L	50	46.1	92	70-130	
Benzo(g,h,i)perylene	ug/L	50	47.6	95	70-130	
Benzo(k)fluoranthene	ug/L	50	45.6	91	70-130	
Benzoic Acid	ug/L	250	101	40	70-130	1g
Benzyl alcohol	ug/L	100	84.3	84	70-130	
bis(2-Chloroethoxy)methane	ug/L	50	46.6	93	70-130	
bis(2-Chloroethyl) ether	ug/L	50	46.3	93	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	50	46.4	93	70-130	
Butylbenzylphthalate	ug/L	50	46.2	92	70-130	
Chrysene	ug/L	50	45.9	92	70-130	
Di-n-butylphthalate	ug/L	50	47.5	95	70-130	
Di-n-octylphthalate	ug/L	50	43.8	88	70-130	
Dibenz(a,h)anthracene	ug/L	50	48.1	96	70-130	
Dibenzofuran	ug/L	50	44.8	90	70-130	
Diethylphthalate	ug/L	50	49.0	98	70-130	
Dimethylphthalate	ug/L	50	46.8	94	70-130	
Fluoranthene	ug/L	50	48.1	96	70-130	
Fluorene	ug/L	50	49.4	99	70-130	
Hexachloro-1,3-butadiene	ug/L	50	42.1	84	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

LABORATORY CONTROL SAMPLE: 1823810

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorobenzene	ug/L	50	48.3	97	70-130	
Hexachlorocyclopentadiene	ug/L	50	37.3	75	70-130	
Hexachloroethane	ug/L	50	42.2	84	70-130	
Indeno(1,2,3-cd)pyrene	ug/L	50	47.5	95	70-130	
Isophorone	ug/L	50	50.3	101	70-130	
N-Nitroso-di-n-propylamine	ug/L	50	46.9	94	70-130	
N-Nitrosodimethylamine	ug/L	50	22.9	46	70-130	1g
N-Nitrosodiphenylamine	ug/L	50	41.8	84	70-130	
Naphthalene	ug/L	50	42.1	84	70-130	
Nitrobenzene	ug/L	50	45.9	92	70-130	
Pentachlorophenol	ug/L	100	95.7	96	70-130	
Phenanthrene	ug/L	50	46.2	92	70-130	
Phenol	ug/L	50	22.1	44	70-130	1g
Pyrene	ug/L	50	44.3	89	70-130	
2,4,6-Tribromophenol (S)	%			96	27-110	
2-Fluorobiphenyl (S)	%			84	27-110	
2-Fluorophenol (S)	%			58	12-110	
Nitrobenzene-d5 (S)	%			86	21-110	
Phenol-d6 (S)	%			43	10-110	
Terphenyl-d14 (S)	%			94	31-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1823811 1823812

Parameter	Units	92312371004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
1,2,4-Trichlorobenzene	ug/L	ND	100	100	81.3	82.6	81	83	70-130	2	30	
1,2-Dichlorobenzene	ug/L	ND	100	100	76.5	74.6	76	75	70-130	3	30	
1,3-Dichlorobenzene	ug/L	ND	100	100	75.8	74.1	76	74	70-130	2	30	
1,4-Dichlorobenzene	ug/L	ND	100	100	73.8	72.4	74	72	70-130	2	30	
1-Methylnaphthalene	ug/L	ND	100	100	84.8	87.7	85	88	70-130	3	30	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	100	100	75.7	78.4	76	78	70-130	3	30	
2,4,5-Trichlorophenol	ug/L	ND	100	100	97.4	96.4	97	96	70-130	1	30	
2,4,6-Trichlorophenol	ug/L	ND	100	100	95.3	93.6	95	94	70-130	2	30	
2,4-Dichlorophenol	ug/L	ND	100	100	90.7	90.0	91	90	70-130	1	30	
2,4-Dimethylphenol	ug/L	ND	100	100	105	103	105	103	70-130	2	3	
2,4-Dinitrophenol	ug/L	ND	500	500	364	355	73	71	70-130	3	30	
2,4-Dinitrotoluene	ug/L	ND	100	100	105	105	105	105	70-130	1	30	
2,6-Dinitrotoluene	ug/L	ND	100	100	101	102	101	102	70-130	1	30	
2-Chloronaphthalene	ug/L	ND	100	100	86.6	86.7	87	87	70-130	0	30	
2-Chlorophenol	ug/L	ND	100	100	85.8	83.4	86	83	70-130	3	30	
2-Methylnaphthalene	ug/L	ND	100	100	85.9	88.0	86	88	70-130	2	30	
2-Methylphenol(o-Cresol)	ug/L	ND	100	100	91.0	89.6	91	90	70-130	2	30	
2-Nitroaniline	ug/L	ND	200	200	167	163	84	81	70-130	2	30	
2-Nitrophenol	ug/L	ND	100	100	89.8	88.2	90	88	70-130	2	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Parameter	Units	1823811		1823812		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92312371004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	100	87.7	84.9	88	85	70-130	3	30	
3,3'-Dichlorobenzidine	ug/L	ND	200	200	153	152	77	76	70-130	1	30	
3-Nitroaniline	ug/L	ND	200	200	160	162	80	81	70-130	1	30	
4,6-Dinitro-2-methylphenol	ug/L	ND	200	200	205	196	102	98	70-130	4	30	
4-Bromophenylphenyl ether	ug/L	ND	100	100	90.8	90.3	91	90	70-130	1	30	
4-Chloro-3-methylphenol	ug/L	ND	200	200	180	191	90	95	70-130	5	30	
4-Chloroaniline	ug/L	ND	200	200	156	158	78	79	70-130	1	30	
4-Chlorophenylphenyl ether	ug/L	ND	100	100	93.8	94.4	94	94	70-130	1	30	
4-Nitroaniline	ug/L	ND	200	200	181	177	91	89	70-130	2	30	
4-Nitrophenol	ug/L	ND	500	500	365	348	73	70	70-130	5	30	
Acenaphthene	ug/L	ND	100	100	87.4	86.9	87	87	70-130	1	30	
Acenaphthylene	ug/L	ND	100	100	87.9	88.5	88	88	70-130	1	30	
Aniline	ug/L	ND	100	100	69.6	63.6	70	64	70-130	9	30	1g
Anthracene	ug/L	ND	100	100	88.3	87.0	88	87	70-130	2	30	
Benzo(a)anthracene	ug/L	ND	100	100	89.4	87.6	89	88	70-130	2	30	
Benzo(a)pyrene	ug/L	ND	100	100	90.9	89.8	91	90	70-130	1	30	
Benzo(b)fluoranthene	ug/L	ND	100	100	89.6	90.0	90	90	70-130	0	30	
Benzo(g,h,i)perylene	ug/L	ND	100	100	88.8	87.9	89	88	70-130	1	30	
Benzo(k)fluoranthene	ug/L	ND	100	100	88.9	90.1	89	90	70-130	1	30	
Benzoic Acid	ug/L	ND	500	500	302	289	60	58	70-130	4	0	1g
Benzyl alcohol	ug/L	ND	200	200	170	170	85	85	70-130	0	30	
bis(2-Chloroethoxy)methane	ug/L	ND	100	100	87.0	87.2	87	87	70-130	0	30	
bis(2-Chloroethyl) ether	ug/L	ND	100	100	82.5	84.9	82	85	70-130	3	30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	100	100	88.2	88.2	88	88	70-130	0	30	
Butylbenzylphthalate	ug/L	ND	100	100	87.1	87.0	87	87	70-130	0	30	
Chrysene	ug/L	ND	100	100	87.6	87.4	88	87	70-130	0	30	
Di-n-butylphthalate	ug/L	ND	100	100	92.2	92.4	92	92	70-130	0	30	
Di-n-octylphthalate	ug/L	ND	100	100	85.5	83.9	85	84	70-130	2	30	
Dibenz(a,h)anthracene	ug/L	ND	100	100	91.4	91.7	91	92	70-130	0	30	
Dibenzofuran	ug/L	ND	100	100	83.2	85.8	83	86	70-130	3	30	
Diethylphthalate	ug/L	ND	100	100	93.9	94.4	94	94	70-130	1	30	
Dimethylphthalate	ug/L	ND	100	100	88.0	89.2	88	89	70-130	1	30	
Fluoranthene	ug/L	ND	100	100	96.9	95.4	97	95	70-130	2	30	
Fluorene	ug/L	ND	100	100	92.9	95.4	93	95	70-130	3	30	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	79.5	79.0	79	79	70-130	1	30	
Hexachlorobenzene	ug/L	ND	100	100	89.9	89.9	90	90	70-130	0	30	
Hexachlorocyclopentadiene	ug/L	ND	100	100	86.7	82.6	87	83	70-130	5	30	
Hexachloroethane	ug/L	ND	100	100	72.1	72.4	72	72	70-130	0	30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	100	100	89.0	88.5	89	88	70-130	1	30	
Isophorone	ug/L	ND	100	100	90.8	94.6	91	95	70-130	4	30	
N-Nitroso-di-n-propylamine	ug/L	ND	100	100	83.4	91.3	83	91	70-130	9	30	
N-Nitrosodimethylamine	ug/L	ND	100	100	57.0	51.0	57	51	70-130	11	30	1g
N-Nitrosodiphenylamine	ug/L	ND	100	100	80.5	81.3	80	81	70-130	1	30	
Naphthalene	ug/L	ND	100	100	78.3	79.4	78	79	70-130	1	30	
Nitrobenzene	ug/L	ND	100	100	86.5	85.9	86	86	70-130	1	30	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1823811		1823812		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92312371004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result										
Pentachlorophenol	ug/L	ND	200	200	204	206	102	103	70-130	1	30				
Phenanthrene	ug/L	ND	100	100	89.7	89.1	90	89	70-130	1	30				
Phenol	ug/L	ND	100	100	56.7	51.8	57	52	70-130	9	30	1g			
Pyrene	ug/L	ND	100	100	85.2	85.2	85	85	70-130	0	30				
2,4,6-Tribromophenol (S)	%						91	93	27-110						
2-Fluorobiphenyl (S)	%						80	83	27-110						
2-Fluorophenol (S)	%						64	61	12-110						
Nitrobenzene-d5 (S)	%						82	82	21-110						
Phenol-d6 (S)	%						53	52	10-110						
Terphenyl-d14 (S)	%						84	79	31-107						

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

QC Batch: 329204

Analysis Method: EPA 8270

QC Batch Method: EPA 3510

Analysis Description: 8270 Water MSSV SC

Associated Lab Samples: 92312680006, 92312680007

METHOD BLANK: 1824500

Matrix: Water

Associated Lab Samples: 92312680006, 92312680007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	10.0	0.98	09/20/16 12:27	
1,2-Dichlorobenzene	ug/L	ND	10.0	0.88	09/20/16 12:27	
1,3-Dichlorobenzene	ug/L	ND	10.0	0.81	09/20/16 12:27	
1,4-Dichlorobenzene	ug/L	ND	10.0	0.95	09/20/16 12:27	
1-Methylnaphthalene	ug/L	ND	10.0	0.32	09/20/16 12:27	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	0.95	09/20/16 12:27	
2,4,5-Trichlorophenol	ug/L	ND	10.0	0.92	09/20/16 12:27	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.3	09/20/16 12:27	
2,4-Dichlorophenol	ug/L	ND	10.0	1.7	09/20/16 12:27	
2,4-Dimethylphenol	ug/L	ND	10.0	1.2	09/20/16 12:27	
2,4-Dinitrophenol	ug/L	ND	50.0	9.0	09/20/16 12:27	
2,4-Dinitrotoluene	ug/L	ND	10.0	0.90	09/20/16 12:27	
2,6-Dinitrotoluene	ug/L	ND	10.0	0.98	09/20/16 12:27	
2-Chloronaphthalene	ug/L	ND	10.0	0.98	09/20/16 12:27	
2-Chlorophenol	ug/L	ND	10.0	1.3	09/20/16 12:27	
2-Methylnaphthalene	ug/L	ND	10.0	0.28	09/20/16 12:27	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.6	09/20/16 12:27	
2-Nitroaniline	ug/L	ND	50.0	2.0	09/20/16 12:27	
2-Nitrophenol	ug/L	ND	10.0	0.91	09/20/16 12:27	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	2.0	09/20/16 12:27	
3,3'-Dichlorobenzidine	ug/L	ND	50.0	2.1	09/20/16 12:27	
3-Nitroaniline	ug/L	ND	50.0	2.0	09/20/16 12:27	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	2.6	09/20/16 12:27	
4-Bromophenylphenyl ether	ug/L	ND	10.0	0.82	09/20/16 12:27	
4-Chloro-3-methylphenol	ug/L	ND	20.0	3.7	09/20/16 12:27	
4-Chloroaniline	ug/L	ND	50.0	2.8	09/20/16 12:27	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	0.87	09/20/16 12:27	
4-Nitroaniline	ug/L	ND	50.0	2.1	09/20/16 12:27	
4-Nitrophenol	ug/L	ND	50.0	4.1	09/20/16 12:27	
Acenaphthene	ug/L	ND	10.0	0.25	09/20/16 12:27	
Acenaphthylene	ug/L	ND	10.0	0.21	09/20/16 12:27	
Aniline	ug/L	ND	10.0	2.0	09/20/16 12:27	
Anthracene	ug/L	ND	10.0	0.14	09/20/16 12:27	
Benzo(a)anthracene	ug/L	ND	10.0	0.33	09/20/16 12:27	
Benzo(a)pyrene	ug/L	ND	10.0	0.30	09/20/16 12:27	
Benzo(b)fluoranthene	ug/L	ND	10.0	0.28	09/20/16 12:27	
Benzo(g,h,i)perylene	ug/L	ND	10.0	0.38	09/20/16 12:27	
Benzo(k)fluoranthene	ug/L	ND	10.0	0.43	09/20/16 12:27	
Benzoic Acid	ug/L	ND	50.0	11.5	09/20/16 12:27	
Benzyl alcohol	ug/L	ND	20.0	2.4	09/20/16 12:27	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	0.92	09/20/16 12:27	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

METHOD BLANK: 1824500

Matrix: Water

Associated Lab Samples: 92312680006, 92312680007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.0	09/20/16 12:27	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	0.79	09/20/16 12:27	
Butylbenzylphthalate	ug/L	ND	10.0	0.79	09/20/16 12:27	
Chrysene	ug/L	ND	10.0	0.21	09/20/16 12:27	
Di-n-butylphthalate	ug/L	ND	10.0	0.75	09/20/16 12:27	
Di-n-octylphthalate	ug/L	ND	10.0	0.66	09/20/16 12:27	
Dibenz(a,h)anthracene	ug/L	ND	10.0	0.55	09/20/16 12:27	
Dibenzofuran	ug/L	ND	10.0	0.89	09/20/16 12:27	
Diethylphthalate	ug/L	ND	10.0	0.58	09/20/16 12:27	
Dimethylphthalate	ug/L	ND	10.0	0.76	09/20/16 12:27	
Fluoranthene	ug/L	ND	10.0	0.21	09/20/16 12:27	
Fluorene	ug/L	ND	10.0	0.21	09/20/16 12:27	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	0.94	09/20/16 12:27	
Hexachlorobenzene	ug/L	ND	10.0	0.72	09/20/16 12:27	
Hexachlorocyclopentadiene	ug/L	ND	10.0	0.88	09/20/16 12:27	
Hexachloroethane	ug/L	ND	10.0	1.1	09/20/16 12:27	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	0.29	09/20/16 12:27	
Isophorone	ug/L	ND	10.0	0.89	09/20/16 12:27	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	0.99	09/20/16 12:27	
N-Nitrosodimethylamine	ug/L	ND	10.0	0.91	09/20/16 12:27	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.0	09/20/16 12:27	
Naphthalene	ug/L	ND	10.0	0.34	09/20/16 12:27	
Nitrobenzene	ug/L	ND	10.0	1.1	09/20/16 12:27	
Pentachlorophenol	ug/L	ND	50.0	4.6	09/20/16 12:27	
Phenanthrene	ug/L	ND	10.0	0.22	09/20/16 12:27	
Phenol	ug/L	ND	10.0	1.9	09/20/16 12:27	
Pyrene	ug/L	ND	10.0	0.19	09/20/16 12:27	
2,4,6-Tribromophenol (S)	%	22	27-110		09/20/16 12:27	S0
2-Fluorobiphenyl (S)	%	22	27-110		09/20/16 12:27	S0
2-Fluorophenol (S)	%	8	12-110		09/20/16 12:27	S0
Nitrobenzene-d5 (S)	%	21	21-110		09/20/16 12:27	
Phenol-d6 (S)	%	5	10-110		09/20/16 12:27	S0
Terphenyl-d14 (S)	%	59	31-107		09/20/16 12:27	

LABORATORY CONTROL SAMPLE: 1824501

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	42.2	84	70-130	
1,2-Dichlorobenzene	ug/L	50	39.6	79	70-130	
1,3-Dichlorobenzene	ug/L	50	40.2	80	70-130	
1,4-Dichlorobenzene	ug/L	50	38.8	78	70-130	
1-Methylnaphthalene	ug/L	50	47.8	96	70-130	
2,2'-Oxybis(1-chloropropane)	ug/L	50	47.5	95	70-130	
2,4,5-Trichlorophenol	ug/L	50	51.0	102	70-130	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

LABORATORY CONTROL SAMPLE: 1824501

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,6-Trichlorophenol	ug/L	50	52.3	105	70-130	
2,4-Dichlorophenol	ug/L	50	50.5	101	70-130	
2,4-Dimethylphenol	ug/L	50	55.6	111	70-130	
2,4-Dinitrophenol	ug/L	250	142	57	70-130	1g
2,4-Dinitrotoluene	ug/L	50	49.6	99	70-130	
2,6-Dinitrotoluene	ug/L	50	53.3	107	70-130	
2-Chloronaphthalene	ug/L	50	50.2	100	70-130	
2-Chlorophenol	ug/L	50	40.6	81	70-130	
2-Methylnaphthalene	ug/L	50	47.7	95	70-130	
2-Methylphenol(o-Cresol)	ug/L	50	39.3	79	70-130	
2-Nitroaniline	ug/L	100	94.9	95	70-130	
2-Nitrophenol	ug/L	50	49.0	98	70-130	
3&4-Methylphenol(m&p Cresol)	ug/L	50	36.8	74	70-130	
3,3'-Dichlorobenzidine	ug/L	100	90.2	90	70-130	
3-Nitroaniline	ug/L	100	83.1	83	70-130	
4,6-Dinitro-2-methylphenol	ug/L	100	93.6	94	70-130	
4-Bromophenylphenyl ether	ug/L	50	55.5	111	70-130	
4-Chloro-3-methylphenol	ug/L	100	99.5	99	70-130	
4-Chloroaniline	ug/L	100	88.9	89	70-130	
4-Chlorophenylphenyl ether	ug/L	50	50.4	101	70-130	
4-Nitroaniline	ug/L	100	78.1	78	70-130	
4-Nitrophenol	ug/L	250	93.5	37	70-130	1g
Acenaphthene	ug/L	50	50.2	100	70-130	
Acenaphthylene	ug/L	50	50.3	101	70-130	
Aniline	ug/L	50	35.4	71	70-130	
Anthracene	ug/L	50	50.5	101	70-130	
Benzo(a)anthracene	ug/L	50	51.8	104	70-130	
Benzo(a)pyrene	ug/L	50	52.3	105	70-130	
Benzo(b)fluoranthene	ug/L	50	50.3	101	70-130	
Benzo(g,h,i)perylene	ug/L	50	54.1	108	70-130	
Benzo(k)fluoranthene	ug/L	50	52.8	106	70-130	
Benzoic Acid	ug/L	250	88.8	36	70-130	1g
Benzyl alcohol	ug/L	100	76.8	77	70-130	
bis(2-Chloroethoxy)methane	ug/L	50	50.7	101	70-130	
bis(2-Chloroethyl) ether	ug/L	50	44.5	89	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	50	51.6	103	70-130	
Butylbenzylphthalate	ug/L	50	50.1	100	70-130	
Chrysene	ug/L	50	52.8	106	70-130	
Di-n-butylphthalate	ug/L	50	48.7	97	70-130	
Di-n-octylphthalate	ug/L	50	44.8	90	70-130	
Dibenz(a,h)anthracene	ug/L	50	51.5	103	70-130	
Dibenzofuran	ug/L	50	47.7	95	70-130	
Diethylphthalate	ug/L	50	47.6	95	70-130	
Dimethylphthalate	ug/L	50	46.5	93	70-130	
Fluoranthene	ug/L	50	51.9	104	70-130	
Fluorene	ug/L	50	50.4	101	70-130	
Hexachloro-1,3-butadiene	ug/L	50	40.2	80	70-130	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

LABORATORY CONTROL SAMPLE: 1824501

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorobenzene	ug/L	50	53.7	107	70-130	
Hexachlorocyclopentadiene	ug/L	50	44.6	89	70-130	
Hexachloroethane	ug/L	50	38.7	77	70-130	
Indeno(1,2,3-cd)pyrene	ug/L	50	52.3	105	70-130	
Isophorone	ug/L	50	56.1	112	70-130	
N-Nitroso-di-n-propylamine	ug/L	50	43.5	87	70-130	
N-Nitrosodimethylamine	ug/L	50	23.3	47	70-130	1g
N-Nitrosodiphenylamine	ug/L	50	50.1	100	70-130	
Naphthalene	ug/L	50	43.4	87	70-130	
Nitrobenzene	ug/L	50	52.6	105	70-130	
Pentachlorophenol	ug/L	100	93.9	94	70-130	
Phenanthrene	ug/L	50	51.9	104	70-130	
Phenol	ug/L	50	20.5	41	70-130	1g
Pyrene	ug/L	50	46.1	92	70-130	
2,4,6-Tribromophenol (S)	%			98	27-110	
2-Fluorobiphenyl (S)	%			94	27-110	
2-Fluorophenol (S)	%			56	12-110	
Nitrobenzene-d5 (S)	%			91	21-110	
Phenol-d6 (S)	%			37	10-110	
Terphenyl-d14 (S)	%			93	31-107	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

QC Batch: 329049

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005, 92312680006

METHOD BLANK: 1823669

Matrix: Water

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005, 92312680006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	1.0	09/19/16 21:22	

LABORATORY CONTROL SAMPLE: 1823670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	48.5	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1823671 1823672

Parameter	Units	92312596052		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Alkalinity, Total as CaCO ₃	mg/L	29.7	50	50	50	77.7	76.4	96	93	80-120	2	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1823673 1823674

Parameter	Units	92312680006		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Alkalinity, Total as CaCO ₃	mg/L	297	50	50	50	345	338	95	83	80-120	2	25	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

QC Batch: 329332

Analysis Method: SM 4500-Cl-E

QC Batch Method: SM 4500-Cl-E

Analysis Description: 4500 Chloride

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005, 92312680006

METHOD BLANK: 1824943

Matrix: Water

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005, 92312680006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	09/20/16 18:44	

LABORATORY CONTROL SAMPLE: 1824944

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824945 1824946

Parameter	Units	92312295005 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Chloride	mg/L	36.5	10	10	66.6	66.6	301	300	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824947 1824948

Parameter	Units	92312680006 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Chloride	mg/L	7.1	10	10	18.0	17.8	108	107	90-110	1	10	

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QUALITY CONTROL DATA

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

QC Batch: 329244

Analysis Method: SM 5310B

QC Batch Method: SM 5310B

Analysis Description: 5310B TOC

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005, 92312680006

METHOD BLANK: 1824620

Matrix: Water

Associated Lab Samples: 92312680001, 92312680002, 92312680003, 92312680004, 92312680005, 92312680006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	09/19/16 18:32	

LABORATORY CONTROL SAMPLE: 1824621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824622 1824623

Parameter	Units	92312596035		MS		MSD		% Rec		Limits		Max		Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Total Organic Carbon	mg/L	0.85J	25	25	25	26.2	26.0	101	101	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824624 1824625

Parameter	Units	92312715002		MS		MSD		% Rec		Limits		Max		Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Total Organic Carbon	mg/L	152	25	25	25	158	154	23	11	90-110	2	10	M6	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: MARSH/PAMPLICO 1584-98-1462
Pace Project No.: 92312680

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

1g Recovery did not meet 70-130% South Carolina required limits. Recovery meets method required in-house generated control limits.

IS The internal standard response is below criteria. Results may be biased high.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

S0 Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MARSH/PAMPLICO 1584-98-1462

Pace Project No.: 92312680

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92312680008	MW-17A	EPA 3510	329806	EPA 8270	329885
92312680009	MW-19	EPA 3510	329806	EPA 8270	329885
92312680010	MW-20	EPA 3510	329806	EPA 8270	329885
92312680001	MW-10	EPA 3510	329083	EPA 8270	329426
92312680002	MW-14	EPA 3510	329083	EPA 8270	329426
92312680003	MW-15	EPA 3510	329083	EPA 8270	329426
92312680004	MW-21	EPA 3510	329083	EPA 8270	329426
92312680005	MW-22	EPA 3510	329083	EPA 8270	329426
92312680006	MW-23	EPA 3510	329204	EPA 8270	329407
92312680007	DUPLICATE	EPA 3510	329204	EPA 8270	329407
92312680001	MW-10	SM 2320B	329049		
92312680002	MW-14	SM 2320B	329049		
92312680003	MW-15	SM 2320B	329049		
92312680004	MW-21	SM 2320B	329049		
92312680005	MW-22	SM 2320B	329049		
92312680006	MW-23	SM 2320B	329049		
92312680001	MW-10	SM 4500-CI-E	329332		
92312680002	MW-14	SM 4500-CI-E	329332		
92312680003	MW-15	SM 4500-CI-E	329332		
92312680004	MW-21	SM 4500-CI-E	329332		
92312680005	MW-22	SM 4500-CI-E	329332		
92312680006	MW-23	SM 4500-CI-E	329332		
92312680001	MW-10	SM 5310B	329244		
92312680002	MW-14	SM 5310B	329244		
92312680003	MW-15	SM 5310B	329244		
92312680004	MW-21	SM 5310B	329244		
92312680005	MW-22	SM 5310B	329244		
92312680006	MW-23	SM 5310B	329244		

REPORT OF LABORATORY ANALYSIS

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Document Name: Sample Condition Upon Receipt(SCUR)

Document Revised: April 25, 2016 Page 1 of 2

Document No.: F-CHR-CS-003-rev.19

Issuing Authority: Pace Huntersville Quality Office

Sample Condition Upon Receipt

Client Name: Same

Project

WO#: 92312680



Courier: [] Commercial [] Fed Ex [] UPS [] USPS [] Client [x] Pace [] Other:

Custody Seal Present? [] Yes [x] No Seals Intact? [] Yes [] No

Date/Initials Person Examining Contents: M 9/13

Packing Material: [] Bubble Wrap [] Bubble Bags [] None [] Other: T1505

Thermometer: Type of Ice: [x] Wet [] Blue [] None [] Samples on ice, cooling process has begun

Correction Factor: 0.0°C Cooler Temp Corrected (°C): 2.1 Biological Tissue Frozen? [] Yes [] No [x] N/A

USDA Regulated Soil [x] N/A, water sample Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? [] Yes [] No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? [] Yes [] No

Table with 2 columns: Question and Comments/Discrepancy. Rows include Chain of Custody Present?, Samples Arrived within Hold Time?, Short Hold Time Analysis (<72 hr.)?, Rush Turn Around Time Requested?, Sufficient Volume?, Correct Containers Used?, Containers Intact?, Samples Field Filtered?, Sample Labels Match COC?, All containers needing acid/base preservation have been checked?, All containers needing preservation are found to be in compliance with EPA recommendation?, Samples checked for dechlorination?, Headspace in VOA Vials (>5-6mm)?, Trip Blank Present?, Trip Blank Custody Seals Present?, Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? [] Yes [] No

Person Contacted: _____ Date/Time: _____ Comments/Sample Discrepancy: _____

Project Manager SCURF Review: TC Date: 9/19/16

Project Manager SRF Review: TC Date: 9/19/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

Low Flow Groundwater Sampling Field Form



Project Name:	Marsh Pamplico, SC	Purge Date:	September 14, 2016
Project Location:	Pamplico, SC	Purge Time:	60 Minutes
Project Number:	1584-98-146C	Sample Date:	September 14, 2016
Source Well:	MW-14	Sample Time:	16:50
Locked?:	No	Weather:	Cloudy/Rain
Sampled By:	Gary Simcox	Air Temp:	84 ° F
Flow Through Cell Serial No.:	21234	Pump Serial No.:	103145
		Calibration Date:	

Water Level & Well Data

Measuring Point:		Top of Casing		Well Volume	
Depth to Water:	5.51	ft-TOC	Well Diameter	2	inch
Total Well Depth:	13.00	ft-TOC	Water Volume	1.2	Gal
Height of Water Column:	7.49	feet	3 * Well Volume	3.67	Gal
Screen Length:		feet	5 * Well Volume	6.11	Gal
Stickup:		ft-GRD			

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	15:45	End Time:	16:45
(If Used) Bladder Pump Control Settings:	On (sec):		Off (sec):		Pressure:		psi
Pump Intake Depth from Top of Casing:		13		ft-TOC			
Water Column Above Pump Intake:		6.99		feet			
DTW-TOC at 25% Drawdown of WC Above Pump:		7.26		Flow Through Cell Vol:		1000	mL
Final Volume Purged:		2.4		Gallons			
Final Volume Purge Rate:		150		mL/min			
Well Purged Dry?:		No		(Yes/No)			
Comments: Used Horiba U-5000 / DR 890Colorimeter Ferrous Iron 2.26 mg/L							

Field Parameters (Taken at time intervals with purge volumes ≥ 2 Flow Through Cell Volumes)

Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (µS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
15:45	0.0									Start Purging
15:55	0.4	150		27.4	4.9	0	0.0	106	6.10	
16:05	0.8	150		27.1	5.3	0	0.0	93	8.70	
16:15	1.2	150		27.1	5.2	0	0.0	93	6.90	
16:25	1.6	150		27.0	5.2	0	0.0	91	5.30	
16:35	2.0	150		26.9	5.2	0	0.0	84	4.70	
16:45	2.4	150		26.5	5.1	0	0.0	77	4.90	
Final:	16:45	2.4	150	26.5	5.1	0	0.0	77	4.9	End of Purging

Sample Method: Peristaltic Pump **Sample Start Time:** 16:50 **Sample End Time:** 17:20

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative
SVOCs 8270	2	1L A	Unpreserved				
Chloride 4500	1	250mL P	Unreserved				
Alkalinity 5310	1	250mL P	Unpreserved				

Name	Signature	Date
(1) Gary Simcox	_____	9/14/2016
(2)	_____	_____

Notes: To convert ORP to Eh, add 205 mv to ORP.

Low Flow Groundwater Sampling Field Form



Project Name:	Marsh Pamplico, SC	Purge Date:	September 14, 2016
Project Location:	Pamplico, SC	Purge Time:	70 Minutes
Project Number:	1584-98-146C	Sample Date:	September 14, 2016
Source Well:	MW-15	Sample Time:	14:45
Locked?:	No	Weather:	Cloudy/Rain
Sampled By:	Gary Simcox	Air Temp:	84 ° F
Flow Through Cell Serial No.:	21234	Pump Serial No.:	103145
		Calibration Date:	

Water Level & Well Data

Measuring Point:		Top of Casing		Well Volume		
Depth to Water:	8.34	ft-TOC		Well Diameter	2	inch
Total Well Depth:	18.10	ft-TOC		Water Volume	1.6	Gal
Height of Water Column:	9.76	feet		3 * Well Volume	4.78	Gal
Screen Length:		feet	Stickup:			ft-GRD
				5 * Well Volume	7.96	Gal

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	13:30	End Time:	14:40
(If Used)	Bladder Pump Control Settings:	On (sec):		Off (sec):		Pressure:	psi
Pump Intake Depth from Top of Casing:		17		ft-TOC			
Water Column Above Pump Intake:		8.16		feet			
DTW-TOC at 25% Drawdown of WC Above Pump:		10.38		ft-TOC			
Final Volume Purged:		2.8		Gallons			
Final Volume Purge Rate:		150		mL/min			
Well Purged Dry?:		No		(Yes/No)			
				Comments:			
Used Horiba U-5000 / DR 890Colorimeter Ferrous Iron 3.30 mg/L							

Field Parameters (Taken at time intervals with purge volumes ≥ 2 Flow Through Cell Volumes)

Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (µS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment	
13:30	0.0									Start Purging	
13:40	0.4	150	8.61	27.1	6.1	1	1.7	-54	44.7		
13:50	0.8	150	8.65	26.5	6.1	1	0.5	-63	32.8		
14:00	1.2	150	8.62	26.1	6.1	1	0.8	-65	16.3		
14:10	1.6	150	8.66	26.1	6.1	1	0.4	-66	11.5		
14:20	2.0	150	8.64	26.0	6.1	1	0.3	-64	13.9		
14:30	2.4	150	8.63	26.0	6.1	1	0.3	-63	14.5		
14:40	2.8	150	8.61	26.0	6.1	1	0.3	-64	14.9		
Final:	14:40	2.8	150	8.61	26.0	6.1	1	0.3	-64	14.9	End of Purging

Sample Method: **Sample Start Time:** **Sample End Time:**

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative
SVOCs 8270	2	1L A	Unpreserved				
Chloride 4500	1	250mL P	Unreserved				
Alkalinity 5310	1	250mL P	Unpreserved				

Name	Signature	Date
(1) Gary Simcox	_____	9/14/2016
(2)	_____	_____

Notes: To convert ORP to Eh, add 205 mv to ORP.

Low Flow Groundwater Sampling Field Form



Project Name:	Marsh Pamplico, SC	Purge Date:	September 15, 2016
Project Location:	Pamplico, SC	Purge Time:	80 Minutes
Project Number:	1584-98-146C	Sample Date:	September 15, 2016
Source Well:	MW-17A	Sample Time:	12:10
Locked?:	No	Weather:	P/Sunny
Sampled By:	Gary Simcox	Air Temp:	85 ° F
Flow Through Cell Serial No.:	21234	Pump Serial No.:	103145
		Calibration Date:	

Water Level & Well Data

Measuring Point:		Top of Casing		Well Volume		
Depth to Water:	8.91	ft-TOC	Well Diameter	2	inch	
Total Well Depth:	18.90	ft-TOC	Water Volume	1.6	Gal	
Height of Water Column:	9.99	feet	3 * Well Volume	4.89	Gal	
Screen Length:		feet	5 * Well Volume	8.15	Gal	
Stickup:		ft-GRD				

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	10:45	End Time:	12:05
(If Used) Bladder Pump Control Settings:	On (sec):		Off (sec):		Pressure:		psi
Pump Intake Depth from Top of Casing:		18		ft-TOC			
Water Column Above Pump Intake:		8.59		feet			
DTW-TOC at 25% Drawdown of WC Above Pump:		11.06		Flow Through Cell Vol:		1000	mL
Final Volume Purged:		2.1		Gallons		Comments:	
Final Volume Purge Rate:		100		mL/min		Used Horiba U-5000	
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals with purge volumes ≥ 2 Flow Through Cell Volumes)

Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (µS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
10:45	0.0									Start Purging
10:55	0.3	100		25.3	7.0	0	0.0	40	208	
11:05	0.5	100		25.9	7.1	0	0.0	-6	102	
11:15	0.8	100		25.9	7.2	0	0.0	-11	96.0	
11:25	1.1	100		26.0	7.1	0	0.0	22	41.6	
11:35	1.3	100		26.2	7.1	0	0.0	-2	36.2	
11:45	1.6	100		26.4	7.1	0	0.0	-5	26.1	
11:55	1.8	100		26.5	7.0	0	0.0	2	21.3	
12:05	2.1	100		26.6	7.1	0	0.0	-2	19.2	
Final:	12:05	2.1	100	26.6	7.1	0	0.0	-2	19.2	End of Purging

Sample Method: Peristaltic Pump **Sample Start Time:** 12:10 **Sample End Time:** 12:30

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative
SVOCs 8270	2	1L A	Unpreserved				

Name	Signature	Date
(1) Gary Simcox	_____	9/15/2016
(2)	_____	_____

Notes: To convert ORP to Eh, add 205 mv to ORP.

Low Flow Groundwater Sampling Field Form



Project Name:	Marsh Pamplico, SC	Purge Date:	September 15, 2016
Project Location:	Pamplico, SC	Purge Time:	70 Minutes
Project Number:	1584-98-146C	Sample Date:	September 15, 2016
Source Well:	MW-19	Sample Time:	8:55
Locked?:	No	Weather:	P/Cloudy
Sampled By:	Gary Simcox	Air Temp:	75 ° F
Flow Through Cell Serial No.:	21234	Pump Serial No.:	103145
		Calibration Date:	

Water Level & Well Data

Measuring Point:		Top of Casing		Well Volume	
Depth to Water:	5.76	ft-TOC	Well Diameter	2	inch
Total Well Depth:	20.40	ft-TOC	Water Volume	2.4	Gal
Height of Water Column:	14.64	feet	3 * Well Volume	7.17	Gal
Screen Length:		feet	5 * Well Volume	11.95	Gal
Stickup:		ft-GRD			

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	7:40	End Time:	8:50
(If Used) Bladder Pump Control Settings:	On (sec):		Off (sec):		Pressure:		psi
Pump Intake Depth from Top of Casing:		19		ft-TOC			
Water Column Above Pump Intake:		13.24		feet			
DTW-TOC at 25% Drawdown of WC Above Pump:		9.07		Flow Through Cell Vol:		1000	mL
Final Volume Purged:		1.8		Gallons		Comments:	
Final Volume Purge Rate:		100		mL/min		Used Horiba U-5000	
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals with purge volumes ≥ 2 Flow Through Cell Volumes)

Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (µS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
07:40	0.0									Start Purging
07:50	0.3	100		23.9	6.2	0	3.5	11	21.2	
08:00	0.5	100		24.0	6.1	0	0.0	14	18.6	
08:10	0.8	100		24.1	6.0	0	0.0	16	14.7	
08:20	1.1	100		24.2	5.9	0	0.0	8	13.4	
08:30	1.3	100		24.4	5.9	0	0.0	-5	11.1	
08:40	1.6	100		24.5	5.9	0	0.0	-13	10.9	
08:50	1.8	100		24.6	5.9	1	0.0	-17	10.0	
Final:	1.8	100		24.6	5.9	1	0.0	-17	10.0	End of Purging

Sample Method: Peristaltic Pump **Sample Start Time:** 08:55 **Sample End Time:** 09:15

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative
SVOCs 8270	2	1L A	Unpreserved				

Name	Signature	Date
(1) Gary Simcox	_____	9/15/2016
(2)	_____	_____

Notes: To convert ORP to Eh, add 205 mv to ORP.

Low Flow Groundwater Sampling Field Form



Project Name:	Marsh Pamplico, SC	Purge Date:	September 15, 2016
Project Location:	Pamplico, SC	Purge Time:	50 Minutes
Project Number:	1584-98-146C	Sample Date:	September 15, 2016
Source Well:	MW-21	Sample Time:	15:20
Locked?:	No	Weather:	P/Sunny
Sampled By:	Gary Simcox	Air Temp:	85 ° F
Flow Through Cell Serial No.:	21234	Pump Serial No.:	103145
		Calibration Date:	

Water Level & Well Data

Measuring Point:		Top of Casing		Well Volume		
Depth to Water:	7.94	ft-TOC	Well Diameter	2	inch	
Total Well Depth:	19.10	ft-TOC	Water Volume	1.8	Gal	
Height of Water Column:	11.16	feet	3 * Well Volume	5.46	Gal	
Screen Length:		feet	5 * Well Volume	9.11	Gal	
Stickup:		ft-GRD				

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	14:25	End Time:	15:15
(If Used) Bladder Pump Control Settings:	On (sec):		Off (sec):		Pressure:		psi
Pump Intake Depth from Top of Casing:		18		ft-TOC			
Water Column Above Pump Intake:		9.56		feet			
DTW-TOC at 25% Drawdown of WC Above Pump:		10.33		Flow Through Cell Vol:		1000	mL
Final Volume Purged:		1.3		Gallons			
Final Volume Purge Rate:		100		mL/min			
Well Purged Dry?:		No		(Yes/No)			
Comments: Used Horiba U-5000 / DR 890Colorimeter Ferrous Iron 0.11 mg/L. Note: Duplicate collected at this location							

Field Parameters (Taken at time intervals with purge volumes ≥ 2 Flow Through Cell Volumes)

Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (µS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
14:25	0.0									Start Purging
14:35	0.3	100		29.0	6.1	0	0.0	127	13.1	
14:45	0.5	100		28.9	5.9	0	0.0	150	14.0	
14:45	0.5	100		28.9	5.7	0	0.0	170	15.7	
14:55	0.8	100		28.8	5.6	0	0.0	180	17.1	
15:05	1.1	100		28.8	5.5	0	0.0	188	19.2	
15:15	1.3	100		28.8	5.5	0	0.0	189	19.0	
Final:										
15:15	1.3	100		28.8	5.5	0	0.0	189	19.0	End of Purging

Sample Method: Peristaltic Pump **Sample Start Time:** 15:20 **Sample End Time:** 16:10

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative
SVOCs 8270	2	1L A	Unpreserved				
Chloride 4500	1	250mL P	Unreserved				
Alkalinity 5310	1	250mL P	Unpreserved				

Name	Signature	Date
(1) Gary Simcox	_____	9/15/2016
(2)	_____	_____

Notes: To convert ORP to Eh, add 205 mv to ORP.

Low Flow Groundwater Sampling Field Form



Project Name:	Marsh Pamplico, SC	Purge Date:	September 15, 2016
Project Location:	Pamplico, SC	Purge Time:	50 Minutes
Project Number:	1584-98-146C	Sample Date:	September 15, 2016
Source Well:	MW-22	Sample Time:	17:15
Locked?:	No	Weather:	P/Sunny
Sampled By:	Gary Simcox	Air Temp:	85 ° F
Flow Through Cell Serial No.:	21234	Pump Serial No.:	103145
		Calibration Date:	

Water Level & Well Data

Measuring Point:		Top of Casing		Well Volume	
Depth to Water:	5.79	ft-TOC		Well Diameter	2 inch
Total Well Depth:	20.50	ft-TOC		Water Volume	2.4 Gal
Height of Water Column:	14.71	feet		3 * Well Volume	7.20 Gal
Screen Length:		feet	Stickup:		ft-GRD
				5 * Well Volume	12.00 Gal

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	16:20	End Time:	17:10
(If Used) Bladder Pump Control Settings:	On (sec):		Off (sec):		Pressure:		psi
Pump Intake Depth from Top of Casing:		19		ft-TOC			
Water Column Above Pump Intake:		13.21		feet			
DTW-TOC at 25% Drawdown of WC Above Pump:		9.09		Flow Through Cell Vol:		1000	mL
Final Volume Purged:		1.3		Comments:		Used Horiba U-5000 / DR 890Colorimeter	
Final Volume Purge Rate:		100				Ferrous Iron 0.52 mg/L	
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals with purge volumes ≥ 2 Flow Through Cell Volumes)

Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (µS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
16:20	0.0									Start Purging
16:30	0.3	100		31.1	6.8	0	0.0	5	15.5	
16:40	0.5	100		29.7	7.0	0	0.0	-47	16.6	
16:50	0.8	100		29.3	7.0	0	0.0	-71	15.3	
17:00	1.1	100		29.1	6.7	0	0.0	-63	13.8	
17:10	1.3	100		29.0	6.5	0	0.0	-56	13.0	
Final:	17:10	1.3	100	29.0	6.5	0	0.0	-56	13.0	End of Purging

Sample Method: Peristaltic Pump **Sample Start Time:** 17:15 **Sample End Time:** 17:45

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative
SVOCs 8270	2	1L A	Unpreserved				
Chloride 4500	1	250mL P	Unreserved				
Alkalinity 5310	1	250mL P	Unpreserved				

Name	Signature	Date
(1) Gary Simcox	_____	9/15/2016
(2)	_____	_____

Notes: To convert ORP to Eh, add 205 mv to ORP.

Low Flow Groundwater Sampling Field Form



Project Name:	Marsh Pamplico, SC	Purge Date:	September 15, 2016
Project Location:	Pamplico, SC	Purge Time:	50 Minutes
Project Number:	1584-98-146C	Sample Date:	September 15, 2016
Source Well:	MW-23	Sample Time:	13:40
Locked?:	No	Weather:	P/Sunny
Sampled By:	Gary Simcox	Air Temp:	85 ° F
Flow Through Cell Serial No.:	21234	Pump Serial No.:	103145
		Calibration Date:	

Water Level & Well Data

Measuring Point:		Top of Casing		Well Volume	
Depth to Water:	7.57	ft-TOC		Well Diameter	2 inch
Total Well Depth:	15.50	ft-TOC		Water Volume	1.3 Gal
Height of Water Column:	7.93	feet		3 * Well Volume	3.88 Gal
Screen Length:		feet	Stickup:		ft-GRD
				5 * Well Volume	6.47 Gal

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	12:45	End Time:	13:35
(If Used) Bladder Pump Control Settings:	On (sec):		Off (sec):		Pressure:		psi
Pump Intake Depth from Top of Casing:		14		ft-TOC			
Water Column Above Pump Intake:		6.43		feet			
DTW-TOC at 25% Drawdown of WC Above Pump:		9.18		Flow Through Cell Vol:		1000	mL
Final Volume Purged:		1.3		Gallons			
Final Volume Purge Rate:		100		mL/min			
Well Purged Dry?:		No		(Yes/No)			
Comments: Used Horiba U-5000 / DR 890Colorimeter Ferrous Iron 3.30 mg/L							

Field Parameters (Taken at time intervals with purge volumes ≥ 2 Flow Through Cell Volumes)

Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (µS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
12:45	0.0									Start Purging
12:55	0.3	100		27.3	6.4	1	0.0	-35	56.4	
13:05	0.5	100		27.4	6.4	1	0.0	-42	26.0	
13:15	0.8	100		27.0	6.3	1	0.0	-37	18.2	
13:25	1.1	100		27.0	6.3	1	0.0	-38	11.8	
13:35	1.3	100		27.0	6.2	1	0.0	-36	11.9	
Final:	13:35	1.3	100	27.0	6.2	1	0.0	-36	11.9	End of Purging

Sample Method: Peristaltic Pump **Sample Start Time:** 13:40 **Sample End Time:** 14:10

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative
SVOCs 8270	2	1L A	Unpreserved				
Chloride 4500	1	250mL P	Unreserved				
Alkalinity 5310	1	250mL P	Unpreserved				

Name	Signature	Date
(1) Gary Simcox	_____	9/15/2016
(2)	_____	_____

Notes: To convert ORP to Eh, add 205 mv to ORP.

Appendix II – Monitoring Well Logs

COMPLETION REPORT OF WELL No. BSW-3

PROJECT: **Marsh Lumber**
 PROJECT NO: **1584-98-146C**
 PROJECT LOCATION: **119 6th Avenue Pamplico, SC**

WATER LEVEL:

DRILLING CONTRACTOR: **Environmental Drilling & Probing Services**

LATITUDE:

DRILLING METHOD: **4 1/4" H.S.A.**

LONGITUDE:

DATE COMPLETED: **9/9/16**

TOP OF CASING ELEVATION:

DATUM:

LOGGED BY: **Lyndal Butler**

STRATA			WELL DETAILS	DEPTH (ft.)	LEGEND	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
DESCRIPTION	SYMBOL	DEPTH (ft.)					
		0		0.00	GS		PROTECTIVE CASING Diameter: Type: Interval:
Topsoil				0.00	CG		
FILL: SILTY SAND strong brown, fine, slightly moist, with trace gravel POSSIBLE FILL: CLAYEY SAND red light gray, fine, moist							RISER CASING Diameter: 2" Type: Sch 40 PVC Interval: +1.5-15.0
LEAN CLAY light gray, fine, moist, with sand		5					GROUT Type: Cement Grout Interval: 0-10.2
CLAYEY SAND light gray, fine, moist							SEAL Type: Bentonite Interval: 10.2-13.5
SANDY SILT light gray, fine, moist		10		10.20	BS		FILTERPACK Type: #2 Sand Interval: 13.5-16.9
SANDY SILT pink reddish yellow, fine, saturated				13.50	FP		SCREEN Diameter: 2" Type: 0.010" Interval: 15.0-16.8
SANDY LEAN CLAY brownish yellow, fine, saturated		15		15.00	TSC		
				16.80	BSC		
				16.90	TD		

LEGEND

	FILTER PACK	TOC	TOP OF CASING
	BENTONITE	GS	GROUND SURFACE
	CEMENT GROUT	BS	BENTONITE SEAL
	FORMATION	BOC	BASE OF OUTER CASING
	STATIC WATER LEVEL	TSC	TOP OF SCREEN
		BSC	BOTTOM OF SCREEN
		TD	TOTAL DEPTH
		CG	CEMENT GROUT

MONITORING WELL - 1584-98-146C MARSH LUMBER 119 6TH AVENUE GPJ WITH CPT.GDT 9/29/16



COMPLETION REPORT OF WELL No. BSW-3

COMPLETION REPORT OF WELL No. MW-17A

PROJECT: **Marsh Lumber**
 PROJECT NO: **1584-98-146C**
 PROJECT LOCATION: **119 6th Avenue Pamplico, SC**

WATER LEVEL: **Depth to water 8.91 feet below top of casing**
9/15/2016

DRILLING CONTRACTOR: **Environmental Drilling & Probing Services**

DRILLING METHOD: **4 1/4" H.S.A.**

DATE COMPLETED: **9/9/16**

LATITUDE:

LONGITUDE:

TOP OF CASING ELEVATION:

DATUM:

LOGGED BY: **Lyndal Butler**

STRATA			WELL DETAILS	DEPTH (ft.)	LEGEND	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
DESCRIPTION	SYMBOL	DEPTH (ft.)					
		0		0.00	GS		PROTECTIVE CASING Diameter: Type: Interval:
FILL: SANDY SILT reddish yellow, fine, slightly moist				0.00	CG		
Topsoil							
FILL: SILT brown, slightly moist, with clay, trace fine sand				3.10	BS		RISER CASING Diameter: 2" Type: Sch 40 PVC Interval: +2.9-5.9
SANDY SILT light gray reddish yellow, fine, moist, with clay				4.50	FP		
		5		5.90	TSC		GROUT Type: Cement Grout Interval: 0-3.1
SILTY SAND yellow dark gray, fine, moist							SEAL Type: Bentonite Interval: 3.1-4.5
		10					FILTERPACK Type: #2 Sand Interval: 4.5-16.1
SILTY SAND very pale brown, fine, very moist, saturated at 10.5 feet							SCREEN Diameter: 2" Type: 0.010" Interval: 5.9-15.9
		15		15.90	BSC		
SAND light gray pink, fine, saturated, poorly graded				16.10	TD		

LEGEND	
	FILTER PACK
	BENTONITE
	CEMENT GROUT
	FORMATION
	STATIC WATER LEVEL
TOC	TOP OF CASING
GS	GROUND SURFACE
BS	BENTONITE SEAL
BOC	BASE OF OUTER CASING
TSC	TOP OF SCREEN
BSC	BOTTOM OF SCREEN
TD	TOTAL DEPTH
CG	CEMENT GROUT

MONITORING WELL - 1584-98-146C MARSH LUMBER 119 6TH AVENUE GPJ WITH CPT.GDT 9/29/16



COMPLETION REPORT OF WELL No. MW-17A

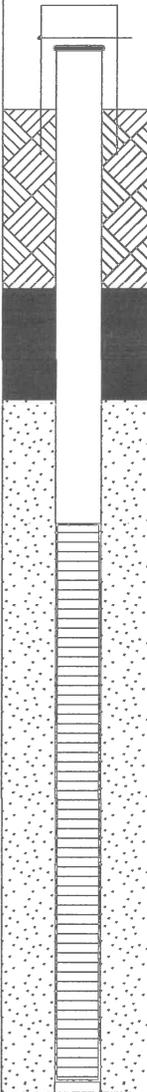
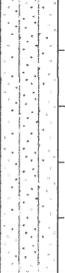
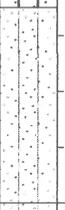
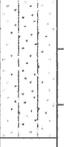
COMPLETION REPORT OF WELL No. MW-19

PROJECT: **Marsh Lumber**
 PROJECT NO: **1584-98-146C**
 PROJECT LOCATION: **119 6th Avenue Pamplico, SC**

WATER LEVEL: **Depth to water 5.76 feet below top of casing on 9-15-2016**

DRILLING CONTRACTOR: **Environmental Drilling & Probing Services**
 DRILLING METHOD: **4 1/4" H.S.A.**
 DATE COMPLETED: **9/8/16**

LATITUDE:
 LONGITUDE:
 TOP OF CASING ELEVATION:
 DATUM:
 LOGGED BY: **Lyndal Butler**

STRATA			WELL DETAILS	DEPTH (ft.)	LEGEND	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
DESCRIPTION	SYMBOL	DEPTH (ft.)					
		0		0.00	GS		PROTECTIVE CASING Diameter: Type: Interval:
FILL: CLAYEY SILT tan yellow, slightly moist, and silty fine sand dark gray; with gravel and asphalt debris				0.00	CG		
FILL: CLAYEY SILT tan yellow, slightly moist				3.20	BS		RISER CASING Diameter: 2" Type: Sch 40 PVC Interval: +2.6-7.4
SILTY SAND dark gray, fine, moist, trace organic debris		5		5.20	FP		GROUT Type: Cement Grout Interval: 0-3.2
				7.40	TSC		SEAL Type: Bentonite Interval: 3.2-5.2
LEAN CLAY olive green, very moist							FILTERPACK Type: #2 Sand Interval: 5.2-17.6
SAND light gray, fine, saturated, with silt		10					SCREEN Diameter: 2" Type: 0.010" Interval: 7.4-17.4
SANDY SILT pale brown, fine, very moist							
SILTY SAND light gray, fine, saturated		15					
SILTY SAND dark brown, saturated, with track mafics				17.40	BSC		
				17.60	TD		

LEGEND			
	FILTER PACK	TOC	TOP OF CASING
	BENTONITE	GS	GROUND SURFACE
	CEMENT GROUT	BS	BENTONITE SEAL
	FORMATION	BOC	BASE OF OUTER CASING
	STATIC WATER LEVEL	TSC	TOP OF SCREEN
		BSC	BOTTOM OF SCREEN
		TD	TOTAL DEPTH
		CG	CEMENT GROUT

MONITORING WELL - 1584-98-146C MARSH LUMBER 119 6TH AVENUE GPJ WITH CPT GDT 9/29/16



COMPLETION REPORT OF WELL No. MW-19

COMPLETION REPORT OF WELL No. MW-20

PROJECT: **Marsh Lumber**
 PROJECT NO: **1584-98-146C**
 PROJECT LOCATION: **119 6th Avenue Pamplico, SC**

WATER LEVEL: **Depth to water 7.37 feet below Top of casing on 9-15-2016**

DRILLING CONTRACTOR: **Environmental Drilling & Probing Services**
 DRILLING METHOD: **4 1/4" H.S.A.**
 DATE COMPLETED: **9/9/16**

LATITUDE:
 LONGITUDE:
 TOP OF CASING ELEVATION:
 DATUM:
 LOGGED BY: **Lyndal Butler**

STRATA		WELL DETAILS	DEPTH (ft.)	LEGEND	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
DESCRIPTION	SYMBOL					
Topsoil			0.00	GS		PROTECTIVE CASING Diameter: Type: Interval: RISER CASING Diameter: 2" Type: Sch 40 PVC Interval: +2.9-3.9 GROUT Type: Cement Grout Interval: 0-1.9 SEAL Type: Bentonite Interval: 1.9-2.9 FILTERPACK Type: #2 Sand Interval: 2.9-14.1 SCREEN Diameter: 2" Type: 0.010" Interval: 3.9-13.9
POSSIBLE FILL: LEAN CLAY dark gray, fine, moist, with sand			0.00	CG		
POSSIBLE FILL: SILTY SAND reddish yellow, fine to medium, moist			1.90	BS		
POSSIBLE FILL: CLAYEY SAND grayish brown, fine, moist			2.90	FP		
LEAN CLAY SAND yellowish red, fine, moist			3.90	TSC		
SAND gray, fine, moist, poorly graded			5			
SILTY SAND black, fine, moist			10			
SAND dark gray, very moist, fine, poorly graded; with silt						
SILTY SAND light brownish gray, fine, saturated						
SAND light gray, poorly graded, very moist			13.90	BSC		
			14.10	TD		

LEGEND

	FILTER PACK	TOC	TOP OF CASING
	BENTONITE	GS	GROUND SURFACE
	CEMENT GROUT	BS	BENTONITE SEAL
	FORMATION	BOC	BASE OF OUTER CASING
	STATIC WATER LEVEL	TSC	TOP OF SCREEN
		BSC	BOTTOM OF SCREEN
		TD	TOTAL DEPTH
		CG	CEMENT GROUT

MONITORING WELL 1584-98-146C MARSH LUMBER 119 6TH AVENUE GPJ WITH CPT GDT 9/29/16



COMPLETION REPORT OF WELL No. MW-20

COMPLETION REPORT OF WELL No. MW-21

PROJECT: **Marsh Lumber**
 PROJECT NO: **1584-98-146C**
 PROJECT LOCATION: **119 6th Avenue Pamplico, SC**

WATER LEVEL: **Depth to water 7.94 feet below Top of Casing on 9-15-2016**

DRILLING CONTRACTOR: **Environmental Drilling & Probing Services**
 DRILLING METHOD: **4 1/4" H.S.A.**
 DATE COMPLETED: **9/9/16**

LATITUDE:
 LONGITUDE:
 TOP OF CASING ELEVATION:
 DATUM:
 LOGGED BY: **Lyndal Butler**

STRATA		WELL DETAILS	DEPTH (ft.)	LEGEND	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS		
DESCRIPTION	SYMBOL							
Topsoil	0		0.00	GS		<p>PROTECTIVE CASING Diameter: Type: Interval:</p> <p>RISER CASING Diameter: 2" Type: Sch 40 PVC Interval: +3.0-5.8</p> <p>GROUT Type: Cement Grout Interval: 0-2.0</p> <p>SEAL Type: Bentonite Interval: 2.0-4.0 + 16.0-17.0</p> <p>FILTERPACK Type: #2 Sand Interval: 4.0-16.0</p> <p>SCREEN Diameter: 2" Type: 0.010" Interval: 5.8-15.8</p> <p>LEGEND</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> FILTER PACK BENTONITE CEMENT GROUT FORMATION STATIC WATER LEVEL </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> TOC TOP OF CASING GS GROUND SURFACE BS BENTONITE SEAL BOC BASE OF OUTER CASING TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH CG CEMENT GROUT </td> </tr> </table>	<ul style="list-style-type: none"> FILTER PACK BENTONITE CEMENT GROUT FORMATION STATIC WATER LEVEL 	<ul style="list-style-type: none"> TOC TOP OF CASING GS GROUND SURFACE BS BENTONITE SEAL BOC BASE OF OUTER CASING TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH CG CEMENT GROUT
<ul style="list-style-type: none"> FILTER PACK BENTONITE CEMENT GROUT FORMATION STATIC WATER LEVEL 	<ul style="list-style-type: none"> TOC TOP OF CASING GS GROUND SURFACE BS BENTONITE SEAL BOC BASE OF OUTER CASING TSC TOP OF SCREEN BSC BOTTOM OF SCREEN TD TOTAL DEPTH CG CEMENT GROUT 							
FILL: SANDY SILT reddish yellow, fine, slightly moist			0.00	CG				
			2.00	BS				
FILL: SILTY SAND light gray red, fine, moist			4.00	FP				
			5.80	TSC				
Topsoil								
SILTY SAND light gray red, fine, moist								
			10					
SILTY SAND light red, fine, very moist								
			15					
SAND reddish yellow, fine to medium, very moist, poorly graded, with silt			15.80	BSC				
			16.00	TD				
FAT CLAY dark gray, very moist			17.00	BS				

MONITORING WELL - 1584-98-146C MARSH LUMBER 119 6TH AVENUE GPJ WITH CPT.GDT 9/29/16



COMPLETION REPORT OF WELL No. MW-21

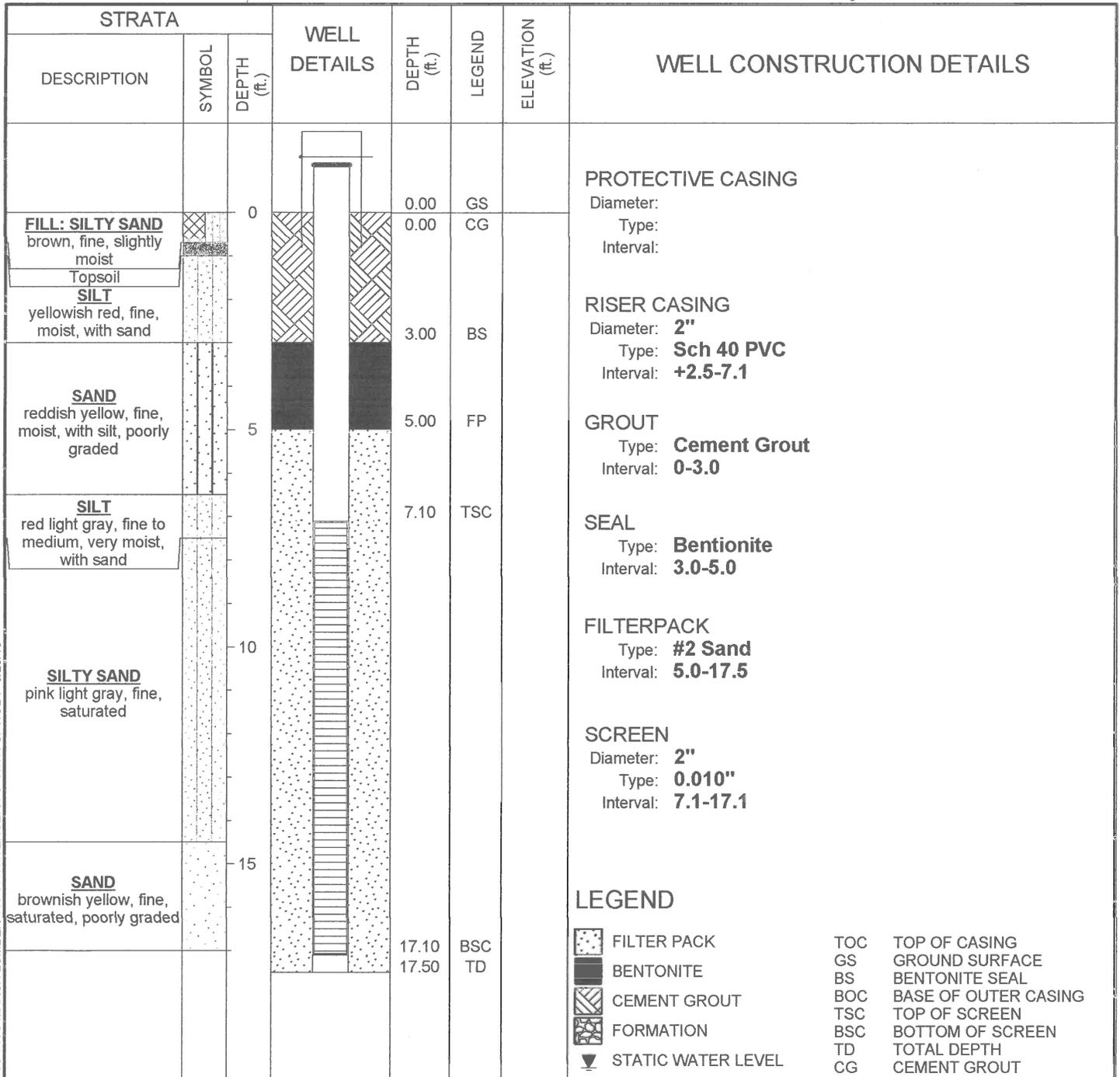
COMPLETION REPORT OF WELL No. MW-22

PROJECT: **Marsh Lumber**
 PROJECT NO: **1584-98-146C**
 PROJECT LOCATION: **119 6th Avenue Pamplico, SC**

WATER LEVEL: **Depth to water 5.79 feet below top of casing on 9-15-2016.**

DRILLING CONTRACTOR: **Environmental Drilling & Probing Services**
 DRILLING METHOD: **4 1/4" H.S.A.**
 DATE COMPLETED: **9/9/16**

LATITUDE:
 LONGITUDE:
 TOP OF CASING ELEVATION:
 DATUM:
 LOGGED BY: **Lyndal Butler**



MONITORING WELL 1584-98-146C MARSH LUMBER 119 6TH AVENUE GPJ WITH CPT.GDT 9/29/16



COMPLETION REPORT OF WELL No. MW-22

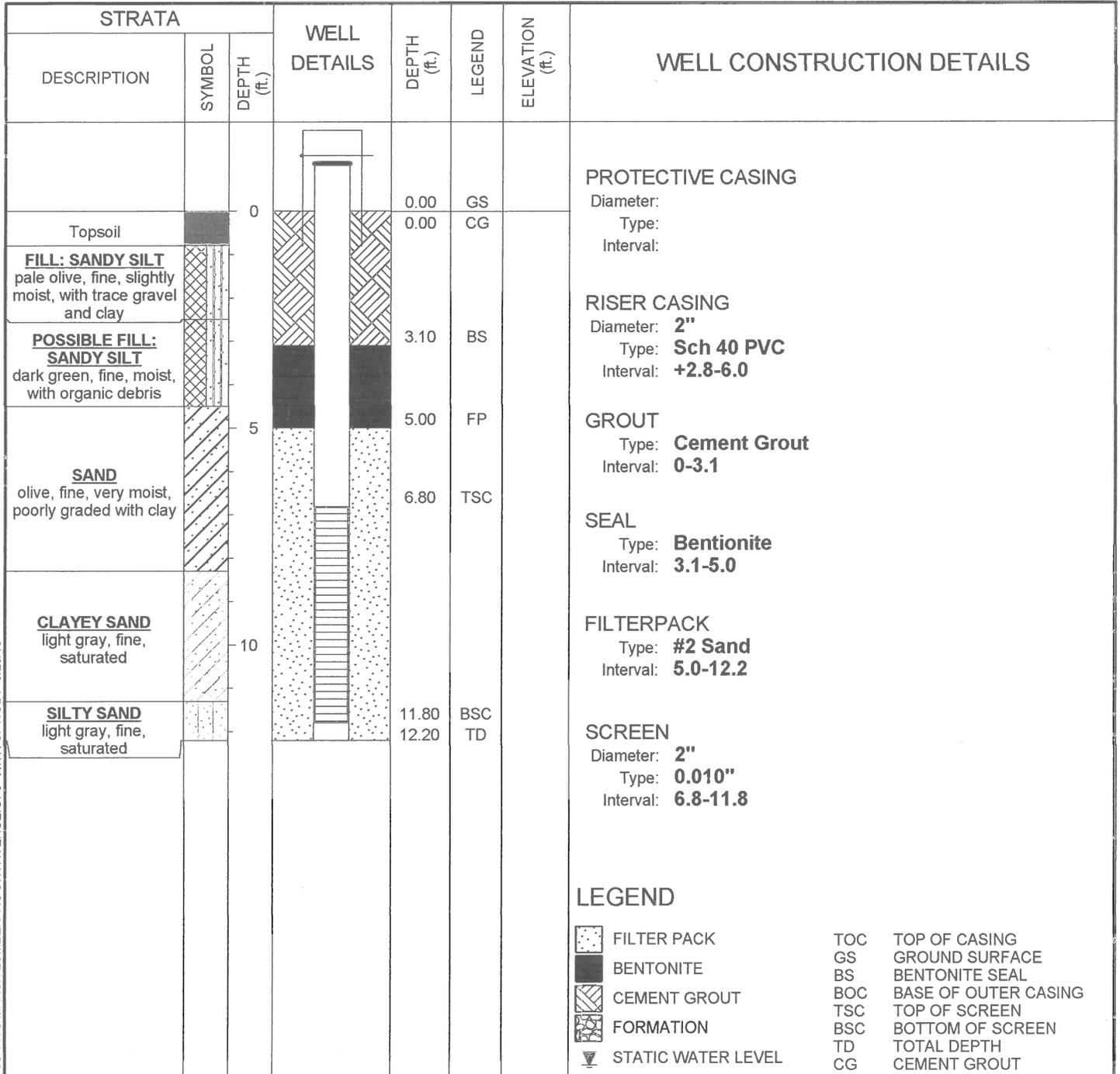
COMPLETION REPORT OF WELL No. MW-23

PROJECT: **Marsh Lumber**
 PROJECT NO: **1584-98-146C**
 PROJECT LOCATION: **119 6th Avenue Pamplico, SC**

WATER LEVEL: **Depth to water 7.57 feet below top of casing on 9-15-2016**

DRILLING CONTRACTOR: **Environmental Drilling & Probing Services**
 DRILLING METHOD: **4 1/4" H.S.A.**
 DATE COMPLETED: **9/9/16**

LATITUDE:
 LONGITUDE:
 TOP OF CASING ELEVATION:
 DATUM:
 LOGGED BY: **Lyndal Butler**



MONITORING WELL - 1584-98-146C MARSH LUMBER 119 6TH AVENUE GPJ WITH CPT GDT 9/29/16



COMPLETION REPORT OF WELL No. MW-23